ECOLOGY AND ENVIRONMENT, INC.,

REGION VI

MEMORANDUM

SUPERFUND
FILE

FEB 12 1993

REORGANIZED

TO: Keith Bradley, Region VI RPO

FROM: Greg McAnarney, FIT Environmental Scientist

THRU: K. H. Malone, Jr., Region VI RPM

DATE: July 16, 1986

SUBJ: Reconnaissance Inspection of Lincoln Properties, Austin, TX (TX20591)
TDD# R06-8604-17

TXD 981 153 971
& Rep Sarbol

Introduction

The FIT was tasked to conduct a reconnaissance/sampling inspection of Lincoln Properties in Austin, Texas. The site is located at the junction of First Street and Congress Avenue in downtown Austin. The site is adjacent to an abandoned coal tar pit derived from a town coal gasification plant that operated at the turn of the century. The site was discovered when Lincoln Properties excavated for a construction project adjacent to the pit.

Per FIT conversation with Barry Nash, Region VI EPA, on June 25, 1986, a memorandum is being submitted in place of the formal report required by TDD# R06-8604-17.

Discussion

Upon arrival at the site it was found that the wastes to be sampled were inaccessible due to the area being backfilled for construction purposes. Only the groundwater and runoff wastewater, which is presently being pumped out of the sumps located in the lowest level of the building, was available for sampling.

The Texas Water Commission (TWC) and the Texas Department of Health (TDH) have been notified of the problem and are working with Lincoln Properties on an agreeable solution for disposal of the accumulated wastes. The wastes are currently stored in a 22,000 gallon Frac tank located on the property (see attached photos 1 and 2). Piezometer wells and test bore holes were installed by Lincoln Properties to determine groundwater flow characteristics and the actual location of the coal tar pit.

Mr. Onjanow of the TWC stated that a grant offer from the U.S. EPA would give the TWC the lead in Town Coal Gasification Projects in the state of

Reviewed by GAW-SC
date 8/11/86

9417764

Texas. The TWC must receive this grant offer and accept it. The TWC will then conduct Preliminary Assessments (PA's) on their sites and will determine where to conduct necessary Site Inspections (SI's).

The TWC and the TDH have been informed of the Lincoln Properties problem since its discovery and are being kept advised regarding any new developments. Attached is a chronological summary (Attachment A) of developments since the discovery of the site and correspondence between Lincoln Properties and the following agencies, i.e. TWC (Attachments E,H,I), TDH (Attachments B,C,K), Austin/Travis County Health Department (Attachments D,G), and the City of Austin - water and wastewater Section (Attachments F,J). Laboratory data from RADIAN Corporation is also attached (Attachment L).

Recommendations

Lincoln Properties has notified all regulatory agencies, as required, and has coordinated with these agencies in developing a proper plan of action to be followed in correcting the problem. FIT recommends that the TWC and the TDH furnish copies of all correspondence corcerning any actions needed or taken at this site. Mr. Kevin Fleming of Lincoln Properties has stated that the contaminants in the coal tar pit will be properly disposed and cleaned up when that portion of their property is excavated in the future. A proposal for disposal and clean up of the coal tar pit will be furnished when excavation has begun.

FIT recommends that the state of Texas be allowed to continue the lead at this site. No further FIT action is required. FIT will forward any additional information received from the aforementioned sources to EPA.

Greg McAnarney

Photographer / Witness

GREG McANARNEY / FRANK Werhalen

Date / Time / Direction

6-4-86 9:33 A.M. NW

Comments: PHOTO #1

FRAC TANK USED

TO STORE Collected Liquid

LINCOLN PROPERTIES

TX 20591

Photographer / Witness

Greg McAnarney / GREG McANARNEY / FRANCE VERHALEN

Date / Time / Direction

6-4-86 9:35 AM NW

Comments: PHOTO #2

TRANSPORTATION TANKER

TRUCK PUMPING OUT

FRAC TANK

LINCOLN PROPERTIES
TX 20591

ATTACHMENT A

7/01/85 Lincoln Property Company discovered black fluid running into pit during excavation of parking garage.

7/01/85 Lincoln Property Company hired Radian to investigate. Radian was selected because they provide:

- investigative capabilities
- legal advice (environmental)

7/10/85 Lincoln Property Company began trucking water to Giddings to dispose of it in a Railroad Commission approved brine injection well.

8/22/85 Lincoln Property Company disposed of contaminated dirt by Longhorn Disposal in Austin Community Landfill pursuant to Texas Department of Health recommendation.

7/16/85 Lincoln Property Company was notified by Radian that the fluid was likely contaminated ground water by coal tar residue.

- Radian's and the University of Texas Archeological Department's historical research indicated an old coal gasification site on Phase II site

- Radian's chemical analysis corresponds with historical research

7/16/85 Lincoln Property Company began storing water temporarily in on-site storage tanks.

- This change in procedure was due to a change in Radian's analysis.

7/16/85 Lincoln Property Company stopped shipping to Giddings.

7/16/85 Lincoln Property Company was notified by Radian to take steps to protect workers in excavation pit - Radian recommended that Lincoln Property Company hire industrial hygiene and occupational safety consulting company (Southwest Occupational Health Services).

7/16/85 Lincoln Property Company was notified by Radian of need to make EPA (Environmental Protection Agency) notice.

7/17/85 Lincoln Property Company was notified by Radian to make Superfund notification to both the National Response Center and the Spill Response Unit of the Texas Department of Water Resources.

7/17/85 Lincoln Property Company was notified by Radian of need to begin a comprehensive program of investigation utilizing surrounding properties.

7/17/85 Lincoln Property Company hired Southwest Occupational Health Services.

7/17/85 Kevin Fleming with Lincoln Property Company notified Bill Hamilton with Manhattan Construction Company orally of safety precautions.

7/18/85 Radian notified Tom Remaley with City of Austin of ground water problem.

7/18/85 Meeting with Spill Response Unit of Texas Department of Water Resources attended by Tom Grimshaw, Lynn Zimmerman - Radian; Kevin Fleming - Lincoln Property

Company; David Barker and Dick Martin - Texas Department of Water Resources; and Steve Drenner - Jenkens & Gilchrist

- Texas Department of Water Resources told Lincoln Property Company that the Texas Department of Water Resources did not have jurisdiction since Lincoln Property Company was excavating for office (i.e. people-oriented) useage rather than industrial useage.

- The Texas Department of Water Resources sent Lincoln Property Company to the Texas Department of Health

7/18/85 Lincoln Property Company notified Manhattan Construction Company of safety precautions by letter.

7/19/85 Meeting with Texas Department of Health attended by Kevin Fleming - Lincoln Property Company; Tom Grimshaw, Robert Wallace - Radian; and Leonard Mohrmann, L.B. Griffith - Texas Department of Health

- Lincoln Property Company made hazardous waste notification
- Texas Department of Health agreed it had jurisdiction of the problem
- At this point, test results were not in yet to determine if the substance was "hazardous" or "non-hazardous"

7/22/85 Radian completed RCRA tests. Liquids are "non-hazardous" for RCRA purposes.

7/24/85 Lincoln Property Company began trucking water to Texas City (Class I facility).

7/30/85 Kevin Fleming with Lincoln Property Company made telephone EPA notice to the National Response Center. Mr. Fleming offered to meet with Region 6 of EPA. He was told to await word from Region 6 if they wanted to meet.

8/3/85 Radian begins conducting geotechnical investigations.

8/3/85 Radian begins water level investigations.

8/6/85 Texas Department of Health writes letters to municipal solid waste sites approving disposal of soil in their facilities.

8/9/85 Lincoln Property Company requested permission from City Water and Wastewater Department to discharge into sanitary sewer system.

8/14/85 Lincoln Property Company received preliminary report from Southwest Occupational Health Services to avoid direct skin contact. Kevin Fleming communicates advice to Manhattan Construction Company.

8/26/85 Lincoln Property Company received written report from Southwest Occupational Health Services. Lincoln Property Company provided this report to Manhattan Construction Company.

9/23/85 City Water and Wastewater refuses Lincoln Property Company's request to discharge into the sanitary sewer system due to:

- quality standards (would required pre-treatment)
- capacity problems

Lincoln Property Company sent to Austin/Travis County Health Department.

10/7/85 Lincoln Property Company requested Fred Rodgers of Austin/Travis County Health Department for permission to discharge into stormwater system after any required pre-treatment.

10/17/85 Austin/Travis County Health Department sends Lincoln Property Company to Texas Water Commission for permission to discharge into stormsewer system. They state they are doing so pursuant to direction from Austin District Office of the Texas Water Commission.

11/21/85 Lincoln Property Company filed application with Texas Water Commission for temporary permit to discharge pretreated liquids into Town Lake.

11/21/85 Kevin Fleming - Lincoln Property Company and Robert Wallace - Radian, meet with Bob Dicks of the Texas Water Commission.

- Bob Dicks suggested that other alternatives be pursued
- Lincoln Property Company was informed that Texas Water Commission would make a decision upon review of temporary permit application

12/13/85 Meeting with Bob Silvus and Bob Dicks of the Texas Water Commission; Kevin Fleming of Lincoln Property Company; Steve Drenner of Jenkens & Gilchrist; and Robert Wallace of Radian.

- Lincoln Property Company told that possibility for getting permit was slim due to "political" realities.
- Lincoln Property Company was encouraged to consider "other alternatives".
- Lincoln Property Company was urged to go back to City Water and Wastewater Department for permission to dispose of in sanitary sewer system.

1/10/86 Meeting with John Ware - Assistant City Manager; Ron Bond - Water & Wastewater Department; Diana Granger - City Attorney's office; Bob Silvus - Texas Water Commission; Kevin Fleming - Lincoln Property Company; and Steve Drenner - Jenkens & Gilchrist.

- Bond: cites ordinance problem and some general reluctance to accept into system as reasons why pretreated fluids can't be discharged into sanitary sewer system
- Silvus: cites political realities of Texas Water Commission permit procedure as reason why pretreated fluids can't be discharged into Town Lake
- proposed solution suggested by Bond and Silvus - look to Austin/Travis County Health Department for permission to dispose of via stormsewer system

1/28/86 Meeting with Kevin Fleming - Lincoln Property Company; Steve Drenner - Jenkens & Gilchrist; and J.D. Head Legal Council for Texas Water Commission.

- Head explained Texas Water Commission permit procedure

- Head expressed doubt over possible success of getting permit

- Rex McDonald brought into meeting (head of enforcement of the Texas Water Commission)

  - He indicated that if the Radian water quality specifications are met, following pre-treatment, the fluid would be close to drinking water quality

  - He indicated no Texas Water Commission permit is necessary to dispose of fluids via stormsewer system

  - Lincoln Property Company told that Head would so advise City and County Health Department

1/31/86 Meeting with Fred Rodgers and Mike Candales - Austin/Travis County Health Department; John Ware - Assistant City Manager, J.D. Head and Bob Silvus - Texas Water Commission; Jim Thompson, Andy Kovar, Ron Bond and Davis Ford - City Water and Wastewater; Diana Granger - City Attorney's office; Steve Drenner and Catherine Miller - Jenkens & Gilchrist; Kevin Fleming - Lincoln Property Company.

- general discussion of all disposal alternatives

- Lincoln Property Company asked to provide more detailed information regarding pre-treatment procedure

2/2/86 Lincoln Property Company provides City Water and Wastewater and Austin/Travis County Health Department some of the requested information.

2/20/86 Jim Thompson requests additional information of Lincoln Property Company.

3/10/86 Fred Rodgers requests additional information of Lincoln Property Company.

3/18/86 Nina Butts press release.

3/19/86 Lincoln Property Company writes letters to Robert Hanneschlager, Chief of Superfund Branch in Dallas, Texas, and Paul Hopkins, Chairman of the Texas Water Commission, responding to Nina Butts' comments.

3/20/86 Robert Phillips with the Texas Water Commission and Doyle Mosier with the Lower Colorado River Authority took samples of ground water at the site.

3/21/86 Lincoln Property Company complies with requests of Mr. Thompson and Mr. Rodgers dated 2/20/86 and 3/10/86, respectively.

3/21/86 Ronny Landry with Lincoln Property Company and Steve Drenner with Jenkens & Gilchrist meet with City Councilmember George Humphrey to give status report.

3/28/86 Meeting with Fred Rodgers, Carol Cook and Steve Ellison - Austin/Travis County Health Department; Andy Kovar, Jim Thompson and Davis Ford - City Water and Wastewater; Kevin Fleming - Lincoln Property Company; Jackson Harper - Espey Huston; Sam Patton - B L & P Engineers; Steve Drenner - Jenkens & Gilchrist; Robert Wallace - Radian Corporation.

- general discussion of all disposal alternatives and Lincoln Property Company responded to questions regarding pretreatment facility and proposed disposal of a regulated amount of treated water to the City wastewater system

- Lincoln Property Company asked to provide additional information

- Lincoln Property Company told a final decision would be made within 1 to 2 weeks after receipt of additional information

4/7/86 Ronny Landry with Lincoln Property Company and Steve Drenner with Jenkens & Gilchrist meet with City Councilmember Dr. Charles Urdy to give status report.

4/10/86 Ronny Landry with Lincoln Property Company and Steve Drenner with Jenkens & Gilchrist meet with City Councilmember Mark Rose to give status report.

4/11/86 Lincoln Property Company submits an Application for Industrial Waste Permit to Jack Gatlin, City Water and Wastewater Department.

4/11/86 Meeting with Nina Butts; Bill Collier (professional researcher); Tom Grimshaw and Robert Wallace - Radian Corporation; Kevin Fleming - Lincoln Property Company; Steve Drenner - Jenkens & Gilchrist.

- Miss Butts given a detailed briefing of Lincoln Property Company's past procedures in dealing with the ground water problem, as well as Lincoln Property Company's preference for a permanent solution utilizing treatment of the ground water via a granular activated carbon filtration system and disposal into the City wastewater system.

4/11/86 Lincoln Property Company complies with requests of Fred Rodgers and Jim Thompson made at 3/28/86 meeting and Lincoln Property Company reaffirms request to treat ground water via granular activated carbon filtration system and then dispose of treated water via City wastewater system.

4/16/86 Ronny Landry with Lincoln Property Company and Steve Drenner with Jenkens & Gilchrist meet with City Councilmember Smoot Carl-Mitchell to give status report.

4/16/86 Ronny Landry with Lincoln Property Company and Steve Drenner with Jenkens & Gilchrist meet with City Councilmember John Trevino's aide, Amelia Rivera, to give status report.

4/21/86 Ronny Landry with Lincoln Property Company and Steve Drenner with Jenkens & Gilchrist meet with City Councilmember Sally Shipman to give status report.

4/29/86 Jack Gatlin with Austin Water and Wastewater asks Kevin Fleming of Lincoln Property Company for additional information.

- suggests a formal written request will be forthcoming

- indicates a permit will be granted within 7 working days after Lincoln Property Company supplies the additional information

5-23-86 - City of Austin - Temp. (1 year) Permit for Industrial Waste Discharge is issued

Attachment B

FILE: TRAVIS CO GDH

Bureau of Solid Waste Management
Texas Department of Health

Memo To File: Office Visit

File NAME: Solid Waste - Travis County **P/PA#** none **County:** Travis

Called by ☐ **Called** ☐ **Met With:** ☑ **Date:** 19 July 1985

Name: Kevin A Fleming (499-8811) Lincoln Property Co. and Thomas Grimshaw (454-4797) Radian Corporation

Subject of Visit: Proper disposal procedures for contaminated soil and water from construction site in 100 block of Congress Ave (Austin)

Lincoln property Company is constructing a building in the 100 block of Congress Avenue in Austin. The excavation will go down approximately 5 stories below ground. At 35 feet there is a contact between the Eagle Ford Shale bedrock formation and the Austin Chalk formation. At approximately this depth seepage from the north and west sides of the excavation began. When the problem developed, Lincoln Property Company engaged Radian Corporation for technical assistance. At first the material appeared to be water contaminated with a petroleum product. No chlorinated hydrocarbons were detected. The contaminated water was taken to a Railroad Commission brine disposal well near Giddings. Subsequent analysis suggested the petroleum material was more like coal tar. Intergroup conferences at Radian led to the possibility that the site is on or near the site of an old coal gasification plant which operated from 1891 to 1920 when natural gas replaced the "town gas" generated by the plant as the source of street lighting. The estimated water flow is 15 gpm and appears to be a steady but pulsating flow.

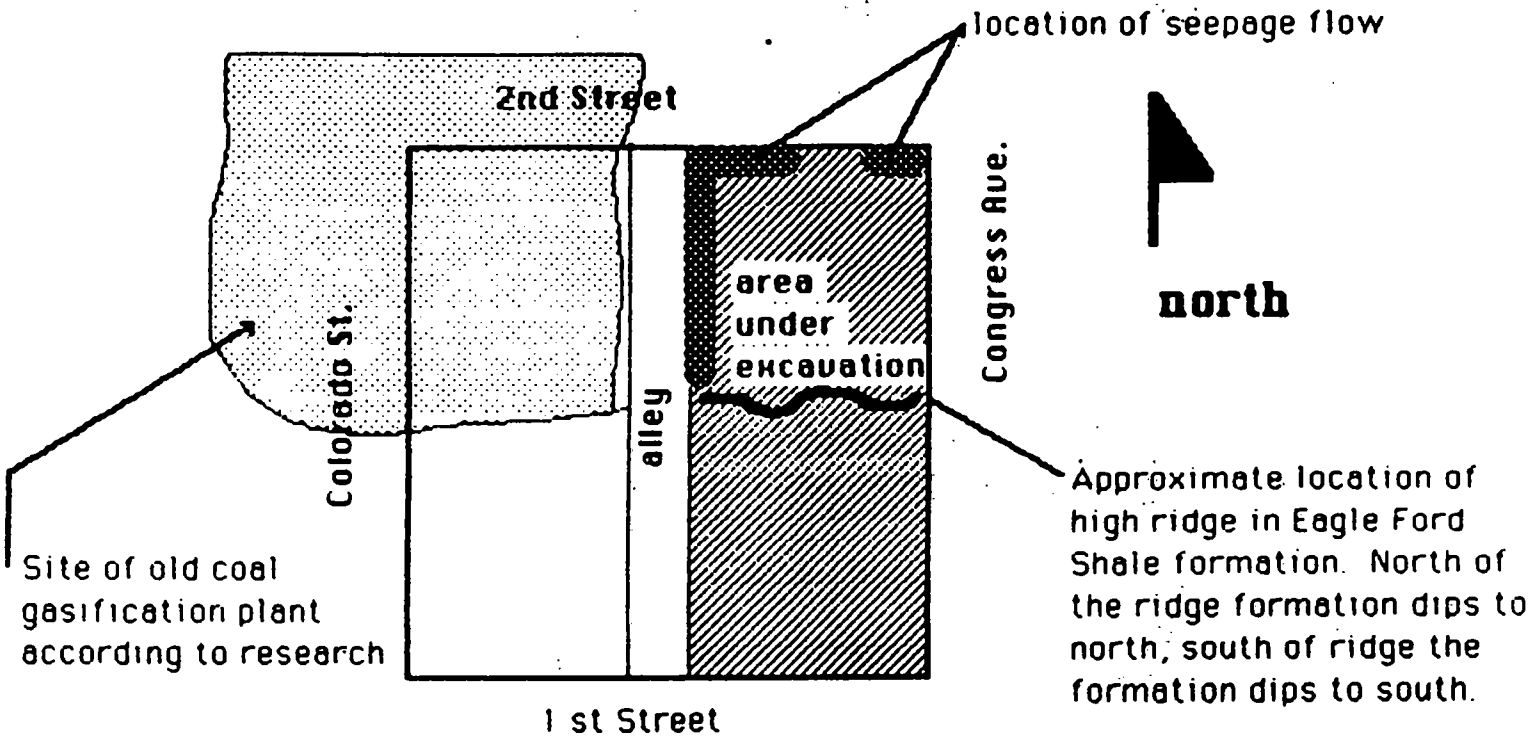
Currently there are three 27,000 gallon tanker trucks full and on site waiting for a disposal site to be selected. The contaminated soil has been stockpiled in a warehouse pending analysis. The Occupational Health Services Company of Houston has done air sampling and has not found compounds is excess of TLVs. They have recommended no contact with the material. TDWR does not consider the incident to be a spill. The situation has been reported to CERCLA and there will probably be a conference in Dallas with federal officials concerning "Superfund" status. The waste has been determined to be a municipal solid waste.

This meeting was sought to propose a course of action for dealing with the waste. The water and the soil will be evaluated with respect to the characteristics of hazardous waste. Pending the results of the analysis the waste water will be considered equivalent to a Class I waste and will probably be taken to a Class I injection disposal well. The soil will be stockpiled. If the material is hazardous, then the soil must go to a permitted hazardous waste disposal site--Texas Ecologists at Robstown, Rollins Environmental Services at Deer Park or out of state. If the waste is not hazardous, then the soil may be disposed of in a Type I municipal landfill if the Department authorizes disposal and the site will accept the waste, and the Railroad Commission will be contacted about allowing the waste water to be disposed of through an oil field waste injection well. There are no waste water treatment plants in the area which could effectively treat this waste.

Radian is to sample the waste streams and analyze the samples. The results are expected by the middle of next week. Lincoln Property Company wishes to continue the project schedule because of commitments to leaseholders in the project and because of interest costs. Mr. Fleming and Dr. Grimshaw were advised to contact Rocky Stevens, P. E., Jerry Garnet, P.E. or Cliff Hall, P.E., depending on the analytical results.

Signed: L E Mohrmann Jr. CPC
Date: July 19, 1985

cc: Mr. Chuck Wentworth, P.E., PHR 6


location of seepage flow
2nd Street
Congress Ave.
north
area
under
excavation
Colorado St.
alley
Site of old coal
gasification plant
according to research
Approximate location of
high ridge in Eagle Ford
Shale formation. North of
the ridge formation dips to
north, south of ridge the
formation dips to south.
1 st Street

would be worthwhile. The Austin Police Department is considering buying the dogs for use in drug enforcement.

Since Monday, two Labrador retrievers owned by the Department of Public Safety have been sniffing checked baggage leaving flights from places like Florida where there is heavy drug trade, said Lt. Pete Taylor, head of the Austin narcotics unit.

One search netted 2 pounds of marijuana and another 10 pounds.

Austin police use dogs in manhunts and other tasks, but have no dogs trained to detect drugs.

"We're running a little experiment, to see what's coming through the airport," Taylor said. "We're spot-checking different flights coming from what we call source cities. We're looking at mostly flights out of Florida."

The dogs and their handlers as[illegible]y can unload the bags." The p[illegible]t is not delaying baggage delivery, although there were a few slow checks Monday, he said.

When the dogs alert police to drugs in a suitcase, police let the bag go through and let the passenger pick it up. The baggage claimant is then asked for identification and to explain why the dogs smelled drugs.

Taylor said it would be some time before a decision is made whether to request drug dogs for the narcotics division.

"We're seeing what the benefits would be," he said. "It's not a cheap proposition." The trained dogs cost $5,000 and up, plus food, medical care, and the cost of a full-time handler.

"All we're doing now is running a test pattern," Taylor said. "We would use them predominantly at the airport" and in running search warrants.

Florist mum on

By Julie Hutchinson
American-Statesman Staff

If any Austinite knows how to keep a secret, it is Naomi McPhail.

McPhail, president of Airport Florist at 3848 Airport Blvd., is quite accustomed to breathless female callers trying to coax from her the identity of the customer who ordered the dozen long-stemmed roses that just landed — anonymously — on their doorsteps.

She does not tell.

This week though, the secret McPhail is keeping is not that of one smitten by the love bug.

This week McPhail and other florists across the country are busy processing orders for the thou-

Naomi McPhail of Airpo
she used to send four o

Oil flow at downtown project fails to fuel black gold fever

By Robert Cullick
American-Statesman Staff

The big excavation shovels at First Street and Congress Avenue have hit oil, but the developer of the office building under construction is not exactly gushing with happiness.

Oil mixed with water is flowing into the northwest corner of the 35-foot-deep pit being prepared for the 100 Congress building, a 400-foot high-rise. The area smells strongly of petroleum, and the sunlight makes rainbow colors on the surface of the flowing water carrying the petroleum.

But the Lincoln Property Co. has no plans to become a wildcatter. "No, there are no derricks on the site," said Kevin Fleming, construction supervisor.

Fleming said 70,000 gallons of the oil-water mixture has been pumped from the pit into tank trucks. The oil mixture is put back into the ground through injection wells in the Giddings area.

"From soil samples we did before we started, we knew we would find it," Fleming said.

The big mystery is where the oil, which appears to be flowing along a bed of shale, might be coming from.

Staff Photo by Mike Boroff
Oil and water pour from the ground at a building site at First Street and Congress Avenue.

Henry Moncure, a consulting archeologist, is investigating the possibility that the hydrocarbons are coming from the remains of a coal gasification plant. The plant was just west of the construction site in the 1890s. Fleming said it is believed that residual coal from the plant might still be in the ground, leaching the oily substance into the water table. The plant produced a low-grade gas for downtown streetlamps.

Fleming said the oil was not hazardous. Excavation was continuing in dry areas in the hope that the flow in the northwest corner would stop. "It has to stop," Fleming said. "But we'll continue to deal with it as we go." He said the excavation was on schedule, and was expected to be completed at a depth of 55 feet in four to six weeks. The hole will be used for a parking garage under the granite-trimmed office building.

The site has also yielded part of a mastodon tusk and historic artifacts, but the most valuable by-product of the excavation has not been historic items or crude oil, but red loam, which was sold by the truckful to landscapers. Spread on lawns all over town, that was the real pay dirt, Fleming said.

Inside

Blind drama

A summer program at the Texas School for the Blind is giving a handful of gifted students an opportunity to explore their dramatic abilities.

Life/Style, G1

Condo woes

Le Palestra, a luxury c
um project being built on
overlooking downtown A
been shut down because
pute over who will pay
struction changes.

Bu

LINCOLN PROPERTY COMPANY

KEVIN A. FLEMING
Construction
512 499-8811

600 Congress Avenue Suite 2180 Austin, TX 78701

Thomas W. Grimshaw, Ph.D.
Program Manager
AIPG Certified Professional Geologist No. 4425

RADIAN
CORPORATION

512 454-4797

P.O. Box 9948 • 8501 Mo-Pac Blvd. • Austin, Texas 78766

Attachment C

Texas Department of Health

Robert Bernstein, M.D., F.A.C.P.
Commissioner

1100 West 49th Street
Austin, Texas 78756
(512) 458-7111

Robert A. MacLean, M.D.
Deputy Commissioner
Professional Services

Hermas L. Miller
Deputy Commissioner
Management and Administration

AUG 6 1985

TEXAS DEPARTMENT OF HEALTH
Lindon Poop
LEONARD E. MOHRMANN, Ph.D., C.P.C.
SURVEILLANCE AND ENFORCEMENT DIVISION
BUREAU OF SOLID WASTE MANAGEMENT
1100 WEST 49TH STREET
AUSTIN, TEXAS 78756-3199
(512) 458-7271

Mr. Mike Tawny
Austin District Manager
Browning-Ferris, Inc.
P.O. Box 1788
Del Valle, Texas 78617

Subject: Solid Waste - Travis County
BFI/Sunset Farms - Permit No. 1447
Immediately S & W of Giles & Blue Goose
Roads Int., 5.0 Miles E of US-290 &
IH-35 Int. and N of US-290

Dear Mr. Tawny:

This letter will confirm the telephone conversation between L. E. Mohrmann, Ph.D., C.P.C., of our staff, and you on July 29, 1985, concerning disposal of the contaminated soil from the construction site at 100 Congress Avenue in Austin, Texas.

Our staff has met with Mr. Kevin Fleming of Lincoln Property and members of the staff at Radian Corporation concerning the nature and amount of the contamination in the soil from the excavation site. The soil has been contaminated through contact with ground water which has been in contact with a coal tar-like material apparently buried on the site of an old coal gasification plant which generated illuminating gas between 1891 and 1920.

The Department has no objection to any Type I municipal solid waste site accepting this contaminated soil. Provided there is no odor problem with the contaminated soil, it may be used for daily cover material if appropriate for daily cover material. When the coal tar-like waste is excavated, it and the immediately surrounding soil must be buried below natural ground level and may not be used for intermediate cover material.

If you have any questions concerning this letter or if we may be of any assistance to you regarding solid waste management, you may contact Dr. Mohrmann here in Austin at telephone number (512) 458-7271 or you may prefer to contact Mr. Charles H. Wentworth, P.E., Regional Director of Environmental and Consumer Health Protection at P.O. Box 190, Temple, Texas 76501; telephone number (817) 778-6744.

Sincerely yours,

L. B. Griffith, Jr., P.E., Director
Surveillance and Enforcement Division
Bureau of Solid Waste Management

LEM:gsr

cc: Region 6, TDH
Austin-Travis County Health Department
Mr. Mike Lawlor, Vice-President, BFI
Mr. Andy Nyby, Region Landfill Manager, BFI
Sunset Farms Landfill Manager
Mr. Kevin Fleming, Lincoln Property
Mr. Jim McCutchan, Radian Corporation

Texas Department of Health

Robert Bernstein, M.D., F.A.C.P.
Commissioner

1100 West 49th Street
Austin, Texas 78756
(512) 458-7111

Robert A. MacLean, M.D.
Deputy Commissioner
Professional Services

Hermas L. Miller
Deputy Commissioner
Management and Administration

AUG 6 1985

Texas Waste Systems, Inc.
c/o Mr. Kevin D. Yard, P.E.
Region Engineer
Waste Management, Inc.
7676 Hillmont, Suite 195
Houston, Texas 77040

Subject: Solid Waste - Travis County
Texas Waste Systems, Inc. - Permit No. 249
0.2 Mile N of US-290, W of Giles Road,
& 5.1 Miles E of US-290 & IH-35 Int.

Dear Mr. Yard:

This letter will confirm the telephone conversation between L. E. Mohrmann, Ph.D., C.P.C., of our staff, and Mr. Jim Hackfeld of Austin Community Disposal on July 29, 1985, concerning disposal of the contaminated soil from the construction site at 100 Congress Avenue in Austin, Texas.

Our staff has met with Mr. Kevin Fleming of Lincoln Property and members of the staff at Radian Corporation concerning the nature and amount of the contamination in the soil from the excavation site. The soil has been contaminated through contact with ground water which has been in contact with a coal tar-like material apparently buried on the site of an old coal gasification plant which generated illuminating gas between 1891 and 1920.

The Department has no objection to any Type I municipal solid waste site accepting this contaminated soil. Provided there is no odor problem with the contaminated soil, it may be used for daily cover material if appropriate for daily cover material. When the coal tar-like waste is excavated, it and the immediately surrounding soil must be buried below natural ground level and may not be used for intermediate cover material.

If you have any questions concerning this letter or if we may be of any assistance to you regarding solid waste management, you may contact Dr. Mohrmann here in Austin at telephone number (512) 458-7271 or you may prefer to contact Mr. Charles H. Wentworth, P.E., Regional Director of Environmental and Consumer Health Protection at P.O. Box 190, Temple, Texas 76501; telephone number (817) 778-6744.

Sincerely yours,

L. B. Griffith, Jr., P.E., Director
Surveillance and Enforcement Division
Bureau of Solid Waste Management

LEM:gsr

cc: Region 6, TDH
Austin-Travis County Health Department
Austin Community Disposal Company, Inc.
Mr. Kevin Fleming, Lincoln Property
Mr. Jim McCutchan, Radian Corporation

Attachment D

LINCOLN PROPERTY COMPANY

October 7, 1985

Mr. Fred Rodgers
Chief, Environmental Health Services
Austin/Travis County Health Department
15 Waller Street
Austin, Texas 78701

Dear Mr. Rodgers:

The purpose of this letter is to request permission to discharge fluids meeting requirements placed by your department from the 100 Congress Avenue construction site to the storm sewer of the City of Austin. The source of these fluids appears to be the past disposal practices of the Austin Gas Works, a facility which operated a coal gasification plant to provide fuel for gas lighting of city streets, at the corner of Colorado and West 2nd Street from 1877 to 1928. The principal contaminant present in these fluids is a hydrocarbon-like material most likely derived from coal tar produced as a waste byproduct of the gasification process.

During the excavation of the 100 Congress Avenue site, we encountered the contaminated fluid at the approximate depth of 30-35 feet. Immediately upon the initial encounter of such fluid, we hired Radian Corporation, environmental engineers with expertise in the area of testing and identifying fluids of this type. Included as attachments to this letter are the results of Radian's chemical analysis of the fluids and soils encountered at the site. These results indicate that the fluids contain concentrations in the part per million range of organic compounds which are typically found in coal tar. However, Radian's tests indicate that the fluids and soils fail to exhibit properties which would make them hazardous under the Resource Conservation and Recovery Act (RCRA) regulations. Also included as attachments to this letter are various background documents and meeting notes from discussions held with officials at the Texas Railroad Commission, the Texas Water Commission (formerly TDWR), the Texas Department of Health, the EPA, and the City Wastewater Treatment Department concerning the fluids and soils and the alternatives for disposing of same. This matter was discussed informally with you and members of your staff on 30 September 1985.

Initially, we experienced a flow of these fluids into our excavation pit at a rate of between 10,000 and 20,000 gallons per day. On a temporary basis, and out of an abundance of caution pending the results of the RCRA tests, we disposed of these fluids to an injection well by trucking them to Texas City via Malone Trucking Company. The cost of this trucking procedure is prohibitive and we feel no longer necessary since the results of the RCRA tests indicate that the fluids and soils fail to exhibit properties which would make them hazardous under the RCRA regulations. In a further effort to prevent or limit the fluids from entering the excavation pit, we have installed an injected grout wall to prevent the fluids from entering the pit.

Nevertheless, it is still necessary to collect and dispose of these fluids at the rate of approximately 2,000 gallons per day, due to leakage through the grout wall.

In addition to the 100 Congress Avenue building, our tentative plans call for the construction of Phase II, a nineteen story office building on the adjacent site where it is believed the actual source of these fluids originate. Preliminary geotechnical investigations have revealed a 20 x 50 foot subsurface pit approximately 8-12 feet deep containing coal-tar waste materials. Below this pit and extending a block or more in some directions, are the hydrocarbon contaminated fluids. Precise determinations of the extent of this contamination are hampered by the density of buildings and subsurface utilities in this area which interfere with geotechnical investigations. However, it appears that the contamination may extend under both City streets and adjacent property in the vicinity of 2nd and Colorado. These investigations are continuing, and we will keep you informed as to their progress.

In regard to the discharge of these fluids into the storm sewer system, we are certainly willing to comply with pretreatment or discharge monitoring requirements. We have authorized Radian to conduct a preliminary study of the feasibility of using an activated carbon filtration system to reduce the concentrations of contaminants in the waters discharged to below the limits specified in the City's ordinance. If these tests are positive, and if a treatment system can be demonstrated to achieve the limits specified, we would like you to approve in concept the discharge of these fluids to the City's storm sewer system before we undertake the financial commitments involved in treating the water.

Our view of these fluids is that they are contaminated drainage water from a building construction site. Our expectation is that this problem is temporary and would be resolved before occupancy in mid-to-late 1986. Since we are taking the lead in helping clean up a problem which we did not create, we feel that we should be allowed to dispose of the fluids after appropriate treatment into the storm sewer system as long as the treated waters meet specifications applicable to other construction site drainage waters. As stated above, we are willing to comply with whatever reasonable requirements you may impose with regard to such treatment and discharge monitoring. Test results by Radian Corporation will be available for your review by October 28, 1985. The test results will be based on the perameters agreed to between Robert Wallace of Radian and Carol Cook in your department.

If there are any questions concerning this information, any additional data requirements, or the need for further discussions, please do not hesitate to ask, for we are interested in the expeditious resolution of this problem.

Sincerely,

LINCOLN PROPERTY COMPANY

Kevin A. Fleming

Kevin A. Fleming
Construction

KAF:sd

enclosures

Attachment E

LINCOLN PROPERTY COMPANY

March 31, 1986

Mr. Bob Silvus
Texas Water Commission
1700 North Congress
Room #1134E
Austin, Texas

Dear Bob:

We are currently negotiating with Windemere Utility Company for the disposal of the groundwater. Windemere Utility Company's discharge permit number is 20542.

In regard to the residual carbon that is used for the pre-treatment system, we acknowledge that proper disposal needs to be undertaken. We propose to test the residual carbon and determine what means of disposal are required by the appropriate regulatory agencies. We will not know the exact methods for disposal until this is done.

I trust that this is the information you needed regarding the proposed alternate methods of disposal. Lincoln Property Company requests that you write a letter to this effect to both Aqua and Associates and Windemere Utility Company in separate letters, your approval of utilizing those wastewater treatment facilities for temporary water disposal.

Please provide these letters as soon as possible. If you have any further questions, please contact Robert Wallace at 454-4797.

Sincerely,

LINCOLN PROPERTY COMPANY

Kevin A. Fleming
Construction Manager

KAF:sd

Attachment F

LINCOLN PROPERTY COMPANY

April 11, 1986

Mr. Jack Gatlin
City of Austin-Water & Wastewater Department
Attention: Industrial Waste Section
P.O. Box 1088
Austin, Texas 78767

Re: 100 Congress

Dear Mr. Gatlin:

Attached is a signed Application For Industrial Waste Permit, for our 100 Congress project.

If you require additional information or if you have any questions, please feel free to contact me.

Sincerely,

LINCOLN PROPERTY COMPANY

Kevin A. Fleming
Construction Manager

KAF:sd

enclosure

City of Austin

Founded by Congress, Republic of Texas, 1839
Municipal Building, Eighth at Colorado P.O. Box 1088, Austin, Texas 78767 Telephone 512/477-6511

Application No.: _____
(City Use)

APPLICATION FOR INDUSTRIAL WASTE PERMIT

Please Complete This Form and Return with ~~$75.00~~ Application Fee

To: City of Austin-Water & Wastewater Department
Attention: Industrial Waste Section
P. O. Box 1088
Austin, Texas 78767 926-0316

1. Name of Firm (Discharger) Lincoln Property Company

2. Location 100 Congress

Phone (512) 499-8811

3. Mailing Address 600 Congress Avenue, Suite 2180 Zip 78701
Austin, Texas

4. Owners Name(s) Lincoln Property Company

5. Type of Business Commercial Office Building
(Restaurant, Laundry, Service Station, Garage, Office, Photo Bakery, Lab, etc.)

* 6. Waste Process(s) Contaminated groundwater from town gas coal gasification plant.
(Equipment/Floor/Utensils Washing, Cooling, Metal Finishing, Mechanical Parts Cleaning, Utility Blowdown, etc.)

* 7. Major Chemicals Used Coal tar.
(Soaps, Detergents, Caustics, Solvents, Acids, Metal Salts, Cyanides, etc.)

* 8. Amount of Wastewater Discharged

(Measured) 6100 Gallons per (Day.) 20 gpm peak flow
or Month
Estimated (Circle One)

*Refer to attached 'ADDITIONAL INFORMATION" sheet for further explanation.

Signed: _____

Title: Construction Manager

Date: April 11, 1986

Check or Money Order No.: _____

OFFICE USE ONLY

1. Wastewater Account No. _____
2. Discharged to _____ (Size) Sanitary Sewer

   Number of Taps _____
3. Other Discharges To _____
4. Significant In-Plant Consumption? Yes ____ No ____ (Check One)
5. Estimated Wastewater Average Under 100,000 ____

   100,000 - 250,000 ____

   250,000 - 1,000,000 ____

   Over 1,000,000 ____
6. Number of Water Meters _____
7. Pre-Treatment Required Y N Types _____
8. Waste Characteristics _____

   _____
9. Describe Existing Pre-Treatment Facility _____

   _____
10. Minimum Pre-Treatment Facility Required _____

    _____
11. Other Permits Required (NPDES, TWQB, Etc.) _____

    _____

Submitted By: _____ Specialist _____ (Date)

Approved By: _____ Supervisor _____ (Date)

Attachment G

ADDITIONAL INFORMATION FOR INDUSTRIAL WASTE PERMIT LINCOLN PROPERTY COMPANY

This further explains items on the Industrial Waste Permit application and addresses requirements found in the City of Austin Ordinance No. 82 1209-F. Please refer to Radian's report "Recommended Groundwater Treatment and Discharge Program for the 100 Congress Avenue Site, Austin, Texas" dated March, 1986.

Application

Item 6. Waste Process (es)

The waste stream is groundwater seepage contaminated with coal tar residues. Refer to Radian report Section 2.1, "Ground-Water Quality".

Item 7. Major Chemicals Used

The waste stream contains coal tar residues. Specifically, base/neutral organics are the pollutants of concern. Refer to Radian report Section 4.0, "Laboratory Treatability Tests", and Appendix B, "Laboratory Analytical Data".

Item 8. Amount of Wastewater Discharged

The average flow rate (4.2 gpm) of groundwater over a six month period was 6100 gallons per day (gpd). The maximum flow rate obtainable from the process is 20 gallons per minute (gpm). Refer to Radian report Section 2.2, "Ground-Water Quality".

City of Austin Ordinance

Sec. 12-2-79. Pretreatment and Disposal of Prohibited Wastes

The waste stream will be pretreated using a settling tank followed by a carbon filtration unit. This system is described in the Radian report, Section 3.2. "Proposed Treatment System", and Section 5.1, "Pilot Scale Filtration System". Specification for the carbon filtration unit are contained in Appendix A, "Installation and Operation of Mobile Klensorb Systems". Analytical results of samples taken from the influent and effluent pretreatment streams are contained in Appendix B, "Laboratory Analytical Data". A flow measurement device will be used at the outlet of the carbon filtration unit to

Sec.. 21-2-80. Special Procedures Relating to Industrial Waste

(10) Accidental Discharges

Accidental discharge of highly contaminated "slug loads" will be prohibited by adding a third component to the pretreatment system, namely Imbiber Beads. This was briefly mentioned in Section 3.2 of the Radian report. The beads exhibit excellent absorption characteristics for organic pollutants. A large filter containing the beads will be placed between the settling tank and carbon filtration unit. Under "normal" conditions the beads will not provide additional Treatment as a result of insensitivity to low concentration of contaminants exhibited in the waste stream. However, if a slug of highly contaminated wastewater were to appear, the beads would absorb most organics thus protecting the carbon bed and maintaining a high quality effluent from the pretreatment system.

LINCOLN PROPERTY COMPANY

April 11, 1986

Mr. James E. Thompson, P.E., Director
Water and Wastewater Utility
City of Austin
1524 South IH-35
Petroleum Building, Suite 200
Austin, Texas 78704

Mr. Fred Rodgers, P.E., Chief
Bureau of Environmental Health Services
Austin/Travis County Health Department
15 Waller Street
Austin, Texas 78701

Re: Ground Water at 100 Congress

Gentlemen:

Lincoln Property Company appreciates the efforts of you and your staff in evaluating the situation at our site. We believe that this letter contains the materials and information requested from the City during our last meeting of March 28, 1986. Lincoln Property Company again formally requests that the City of Austin accept the treated fluid into the City wastewater system conditioned upon Lincoln Property Company's compliance with the treatment, monitoring and disposal system outlined in this letter and the prior materials delivered to you. Lincoln Property Company also secondarily requests that if the City does not allow the treated fluid into the wastewater system, the City accept the treated fluid into the storm drainage system subject to Lincoln Property Company's compliance with the same conditions.

One of the major concerns expressed by the City of Austin was the ability of Lincoln Property Company to dispose of the ground water in excess of the 20 gpm discharge proposed to the wastewater system. During the past nine months Lincoln Property Company has properly disposed of over 1 million gallons of contaminated water utilizing a trucking/disposal company located in Texas City, Texas. Lincoln Property Company assures the City of Austin that this type of response and commitment will continue to be exercised as long as necessary. Nevertheless, Lincoln Property Company has developed a contingency plan as requested by the City of Austin which is outlined in this letter.

600 Congress Avenue Suite 2180 Austin, TX 78701 512 499-8811

The basic elements of proposed treatment of the groundwater are as follows: Ground water is collected through drainage systems in sumps in the base level of the building structure. The collected water is then pumped to a storage tank located at street level. The storage tank provides gravity settling and equalization of the water. The water is then pumped through a granulated activated carbon filtration system situated on the site and then discharged to the wastewater system with periodic monitoring.

Essentially there were eleven (11) areas of concern identified by the City during our last meeting of March 28, 1985, in the discussion of Lincoln Property Company's request: 1) Monitoring of the flow rate of groundwater into the storage tank, 2) Limiting the flow rate to 20 gpm to the City wastewater system, 3) The reaction time of Lincoln Property Company to respond to a flow rate greater than 20 gpm, 4) Proper and timely disposal of the groundwater in excess of 20 gpm, 5) The ultimate fall back position for storage/disposal of groundwater if normal disposal at 20 gpm into the wastewater system coupled with hauling of water in excess of 20 gpm is not sufficient to handle a flow rate up to 100 gpm, 6) Monitoring of the quality of discharge to the City wastewater system, 7) Batch operation versus continuous operation with both discharge and process monitoring, 8) Removal of the potential coal tar body on the adjoining lot, 9) Utilization of the existing wastewater tap, 10) Alternate disposal methods, and 11) The level of sulphates in the treated groundwater. A discussion of these concerns and the methods proposed by Lincoln Property Company to address them are discussed below.

1. <u>Monitoring of Flow Rate</u>

   Lincoln Property Company will commit to utilizing various methods of monitoring the flow rate of the groundwater as outlined below.

   During Construction:

   Review of precipitation records of the weather service office in Austin and amounts of water trucked from the site from 1 August 1985 to 31 January 1986 indicate that drainage water peak flows can be effectively anticipated by monitoring on-site precipitation. See Figure 1. A rainfall gauge will be installed at the construction office (trailer)

at the building site, and precipitation will be recorded on a daily basis. During extended or intense storm events, precipitation amounts will be measured more frequently.

Drainage water entering the building excavation accumulates in four collection sumps in two areas in the excavation floor. Each sump is 14 feet deep, has a diameter of 8 feet, and has a total volume of 700 cu. ft. (5236 gal). Therefore, there is a total storage capacity in the sumps of approximately 21,000 gal. The collection sump system has an installed pump capable of delivering 150 gal/min of water to street level. Water-level sensors in the system switch the pump on. Discharge from the collection sump pump is directed to a 22,000-gal steel tank (frac tank) located at street level. During construction, the volume of water pumped to the storage tank will be monitored by means of an in-line flow meter installed near the tank inlet.

The volume of water stored in the tank will be monitored visually with a glass tube mounted on the exterior of the tank. The level tube will be calibrated to register tank volume in gallons. A high water-level switch in the storage tank will inactivate the sump pump in the excavation floor to prevent overfilling of the storage tank.

An additional water-level switch in the tank will activate a pump to the filtration system when the water level in the tank is sufficient to maintain pump suction.

During Normal Operation:

Monitoring procedures following building completion will not differ from those used during construction, except that tasks that were previously manual will be handled by the building's energy management system on a routine basis. Manual monitoring of the drainage water treatment system will be possible during normal operation also. Changes to the monitoring system during normal operation will consist of the following:

1. An automated precipitation (rainfall) gauge with digital output will be located on the building roof.
2. Water-level sensors with digital output capability will be installed in the collection sumps to measure and record water level changes over time (i.e. rate of inflow).

3. Water-level sensors with digital output capability will be installed in the frac tank to measure and record water level changes over time.

2. Limiting Flow Rate

Flow from the treatment system will be limited to a maximum of 20 gpm by the installation of a 20 gpm flow restricter as indicated on the enclosed drawings. Therefore, by using this system, it is not possible to exceed the 20 gpm limit to the City wastewater system.

3. Reaction Time

Lincoln Property Company will use all available information (local weather forecasts, flood warnings, etc.) and their past experience in handling the water inflows to forecast the requirements for standby trucks. This experience indicates that there is a one-to-two day lag between precipitation and peak flow to sumps as indicated by Figure 1. The circumstances causing a 100 gpm inflow would require a major flood in the Colorado River system. This would be preceded by periods of wet weather in the upstream drainage areas in the Colorado and also preceded by flood warnings issued by the National Weather Service and the LCRA. This would provide an ample advance warning of the requirement for trucks during such an extreme event.

In Attachment #1, titled "Groundwater Seepage Analysis" produced by Espey, Huston & Associates the probability of a 100 gpm of seepage occurring is discussed. Please note that the report concludes that the probability of a 100 gpm seepage occurring is less than 1% per year.

4. Proper and Timely Disposal

Nine months of successful operating experience by the contractor at the site indicate that drainage water inflows are unlikely to exceed the treatment rate of 20 gpm. During normal building operation, drainage water flows may decrease to less than the average 4.24 gpm previously encountered, since inflows will no longer include direct precipitation or surface runoff. A report that addresses the probable average and potential maximum rates of groundwater seepage is included in Attachment #1.

This section describes the contingency plan to be implemented for controlling drainage water volumes in excess of the treatment system's capacity. In brief, the plan involves certain actions to be taken in response to increased drainage water inflow. A condition O will correspond to normal inflow rates (less than 20 gpm). When flows are anticipated to exceed this rate, a condition 1 will be established. When inflows actually exceed the treatment rate and available storage, condition 2 will be implemented. Under condition 1, truck haulers under contract to Lincoln Property Company will be put on standby notice to have trucks ready to mobilize to the building site. Under condition 2, the trucks will move into operation and remove excess water from the site. Under no conditions will untreated water be discharged to the City wastewater system.

During Construction:

Precipitation measured at the site will be used to signal a change to condition 1. At present, it is planned to initiate condition 1 when daily rainfall exceeds 2 inches. Under condition 1, flow to the frac tank and tank levels will be monitored on an hourly basis to determine changes in the rate of flow. Projections of the time remaining before the tank reaches its maximum capacity will be made by using a graph such as that illustrated on Fig. 2. This graph is based on a sump pumping rate of 150 gpm and shows the relationship of time remaining until tank capacity is reached, the average flow rate into the tank, and the existing volume of water in the tank.

When it is determined that flow will exceed available tank and sump storage, condition 2 will be initiated, and immediate notice will be given to the haul contractor to mobilize trucks to the site. Previous experience at the project site has shown that the response time for the haul trucks is 4 hours between time of notification and time of arrival. Accordingly, at a minimum condition 2 will be initiated when the time remaining until storage capacity is reached is 4 hours or less. It is estimated that once trucks arrive at the site it would take a maximum of 488 minutes to empty the tank taking into account a continuous 20 gpm discharge and pumping into trucks. Once the tank is empty, a truck would be required on the average of 60 minutes to maintain an empty tank at an inflow of 100 gpm.

If the tank reaches full capacity, power to the collection sump pumps will be switched off and excess flow will be allowed to accumulate in the sumps. The effective storage capacity of the sumps is 80% of their total volume, or 16,750 gallons. If sump capacity is exceeded, the water will be allowed to accumulate at the basement level of the building. Approximately 18,987 gallons of storage are available in the basement for each inch of water depth that accumulates.

Condition 2 will remain in effect until drainage water inflows are reduced to less than 20 gpm and excess water has been removed from the basement, sumps, and frac tank.

During Normal Operation:

The contingency plan to be followed after the building is completed is similar to that followed during construction. Differences relate to the method by which rainfall and inflows are monitored and used to initiate conditions 1 and 2.

During normal operation, drainage water inflows will be monitored remotely by the building's energy management system. The system will record and process data and signal building maintenance personnel when predefined flow and storage conditions occur which require initiation of the contingency plan. The resultant response actions will be the same as those discussed during construction.

5. Ultimate Fall Back Position

The ultimate fall back position for the flow of groundwater in the event of equipment malfunction or of delay in the truck hauling is to allow the groundwater level to rise in the fifth level of the underground parking garage. The water would enter the garage through the sump and accumulate on the fifth level.

In the event of maximum water flow of 100 gpm, the water depth in the garage would rise at the rate of 0.32 inches per hour or about 7.6 inches in a 24 hour period. The bottom level of the garage has 30,457 square feet of floor area. One inch of water equates to 18,987 gallons over this

area. This would result in an additional storage capacity of 1,800,000 gallons and the ability to accomodate over 10 days of 100 gpm of inflow.

6. Monitoring Quality of Discharge

The quality of groundwater is to be monitored per the following:

Twice weekly sampling will be conducted from the treatment system effluent. Chemical analysis of these samples will be for total organic carbon (TOC). If the concentration of TOC exceeds 20 mg/L, monitoring for total extractable organics (TEO) will be initiated. When the TEO concentration exceeds 0.5 mg/L, the activated carbon will be replaced. Monitoring for both TOC and TEO will continue as long as the concentration of TOC remains above 20 mg/L and TEO remains below 0.5 mg/L. If TOC levels fall below 20 mg/L, TEO monitoring will be discontinued.

In addition, weekly process monitoring of the effluent from the first carbon column (taken between the two carbon columns) will consist of analysis of samples for TOC. These data will be used to monitor the performance of the first carbon in removing organics from the groundwater. When the TOC of the effluent from the first carbon column exceeds 20 mg/L, Lincoln Property Company will initiate monitoring for TEO to determine whether any of the coal tar contaminants are getting through the first carbon column or simply change out the activated carbon. In this way process monitoring will insure that the discharge quality is maintained and allow sufficient time for carbon replacement before "breakthrough" occurs in the second carbon column. A back-up carbon filtration system will also be installed to provide additional assurance of being able to meet discharge limits. This system can be placed in operation manually.

Although the monitoring limits are somewhat unusual, Radian Corporation feels such limits are justified because of the uniqueness of the situation. As demonstrated by the isotherm and column tests, TOC effluent levels of 5-15 ppm do not contain any coal tar contaminants after contact with carbon. Consequently, as long as the TOC is being removed across the carbon, it is most probable that no coal tar contaminants are being discharged. If, due to unforeseen circumstances, the TOC should exceed 20 mg/L in the

effluent, Lincoln Property Company has the option of either replacing the carbon or performing the total extractable organic analysis to determine if breakthrough has occurred. If the TEO results are above 0.5 mg/L, the carbon will be replaced.

In addition to the treated wastewater, there will be four solid streams from the recommended treatment system -- spent carbon from the activated carbon units, sludge from the frac tank, sludge from the sump pump pit, and sand from sand traps in the excavation. These materials will be tested and disposed of in an appropriate manner in accordance with applicable regulations.

7. Batch Operation Versus Continuous Operation of the System

Based on the proposed treatment system and monitoring scheme, Radian recommends operation of the system on a continuous basis. The nature of activated carbon filtration systems is such that continuous operation with discharge and process monitoring provides more than adequate protection against exceedances. This is due to the fact that organic contaminants are trapped in the pore spaces of the activated carbon on a sequential basis. The first column will remove the contaminant until breakthrough occurs. After breakthrough occurs in the first column, contaminants will be removed in the second column until breakthrough also occurs there. Monitoring the effluent from the first column on a weekly basis will allow sufficient time to replace the carbon in the first column and still be removing organics in the second carbon column. It is estimated that breakthrough of the first carbon column will occur after six months of normal operation assuming the total coal tar contaminants are at the 1 mg/L level. Since the coal tar contaminants are currently below the detection limits (approximately 1 ug/L or 1000 times less concentrated) the first column breakthrough may not occur in even the first year of operation. Nevertheless, when breakthrough occurs in the first column, there will be an equivalent period of time until breakthrough will occur in the second carbon column, allowing more than an adequate margin of safety and sufficient time to replace the carbon in the first column.

Accidental discharge of highly contaminated "slug loads" will be prohibited by adding a third component to the pretreatment system, namely Imbiber Beads. This was briefly

mentioned in Section 3.2 of the Radian report. The beads exhibit excellent absorption characteristics for organic pollutants. A large filter containing the beads will be placed between the settling tank and carbon filtration unit. Under "normal" conditions, the beads will not provide additional treatment as a result of insensitivity to low concentration of contaminants exhibited in the waste stream. However, if a slug of highly contaminated wastewater were to appear, the beads would absorb most organics thus protecting the carbon bed and maintaining a high quality effluent from the pretreatment system.

8. Removal of Potential Wastebody

As described in prior materials sent to you, Radian has identified a suspected wastebody on the land adjacent to the 100 Congress building. The dimensions of the suspected wastebody are approximately 20' wide x 30' long x 12' thick. Radian has also informed us that there may be additional wastebodies on surrounding sites. Radian does not believe that the identified suspected wastebody has contributed in the last several years or is currently contributing to the contamination of the groundwater since the slab of the warehouse is over the wastebody making it isolated from either groundwater or precipitation. This would make it virtually impossible for additional leaching of contaminates into the groundwater. Lincoln Property Company commits to the removal of the identified suspected wastebody within a two year period which coincides with the anticipated excavation and subsequent erection of the planned 19 story office building and associated parking garage on the adjacent site.

9. Wastewater Taps

Lincoln Property Company proposes to utilize the existing wastewater tap for the Industrial Discharge Permit during the course of construction. At the end of construction, the disposal system will then utilize a new wastewater tap purchased for that specific use.

10. Alternate Disposal Methods

At the suggestion of Fred Rodgers, Lincoln Property Company has contacted Charles Jordan of the Parks and Recreation Department in regard to the possibility of utilizing the

treated groundwater for irrigation of Town Lake Park. Jim Rodgers is to respond to Lincoln Property Company. We again state that it is our preference to utilize the sanitary sewer system for disposal rather than any other method, including irrigation of Town Lake Park. As discussed at the March 28, 1986 meeting, we think there would be various mechanical and procedural problems in utilizing the treated groundwater for irrigation, as well as other environmental concerns.

11. Level of Sulphates

The applicable City ordinance limits sulphates to 500 parts/million. The latest test results in February of 1986 indicate that the level of sulphates is currently in the 200-250 parts per million range. It is anticipated that the concentrations will continue to decrease.

Summary

In summary, Lincoln Property Company requests that the City of Austin accept the treated water into the sanitary sewer system subject to the treatment, monitoring and disposal system and procedures outlined in this letter and in the prior materials sent to you. Attached is a City of Austin Application for Industrial Waste Permit for the groundwater. To the extent necessary Lincoln Property Company requests that you grant a variance to the City ordinance which prohibits the City to accept drainage water into the wastewater treatment system of the City. We think the critical elements of this plan are as follows:

(1) Even though Radian's most recent data indicates that there are no detectable levels of coal tar contaminate in the groundwater, the groundwater flowing into the site will be treated via a granular activated carbon treatment system which Radian tells us is the most effective treatment system for groundwater containing coal tar contaminates. The water will then be discharged to the wastewater system of the City of Austin providing another level of treatment prior to being discharged with other treated effluent of the City.

(2) The quality of the treated groundwater will be quite good as indicated in the materials previously delivered to you;

(3) No more than 20 gpm of treated water can pass from the treatment facility into the sanitary sewer system which guarantees the City of Austin that the proposed discharge will not overly or suddenly burden the sanitary sewer system;

(4) Lincoln Property Company will be obligated to haul any water in excess of the treated water discharged into the sanitary sewer system at the rate of 20 gpm; and

(5) Assuming a worst case (and highly unusual) scenario, even if Lincoln Property Company fails to haul any excess treated water, the effect of such failure will be a flooding of the underground parking garage at 100 Congress and not an increased discharge into the sanitary sewer system nor a discharge at ground level.

Lincoln Property Company is additionally requesting that the City of Austin accept the treated water into its storm sewer system only if the City refuses to accept the treated water into its sanitary sewer system. As we have discussed, for a variety of reasons we think it would be preferable to discharge the treated water into the sanitary sewer system.

Lincoln Property Company urges the City to assist Lincoln in addressing the groundwater problem which Lincoln discovered at the 100 Congress site. As you know, Lincoln has spent a great deal of time and money attending to the groundwater problem, a problem which Lincoln did not cause and which appears to have existed for almost 100 years. Over the past nine months, Lincoln has implemented the safest and most conservative temporary disposal plan by hauling the untreated water to the Class I disposal facility in Texas City. Due to the prohibitive costs involved, trucking is not a feasible long term solution for Lincoln or any other property owner in the vicinity which discovers it is also affected by the same problem. Additionally, the data collected by Radian regarding the quality of the water indicates that use of a Class I facility is certainly not necessary. Lincoln and its consultants think that the treatment, monitoring and disposal plan outlined in this letter and in the prior materials delivered to you presents a safe and sensible plan for disposal of the groundwater.

Jim Thompson indicated at our last meeting that the City would have a decision on Lincoln's request within one or two weeks following the City's receipt of the enclosed information. We hope that you can comply with that time frame. Please call me if you have any questions regarding the proposed system.

Sincerely,

Kevin Fleming
Construction Manager

cf

cc: Davis Ford
John Ware

TEXAS WATER COMMISSION

Attachment H

May 6, 1986

Mr. Kevin A. Fleming
Construction Manager
Lincoln Property Company
600 Congress Avenue, Suite 2180
Austin, Texas 78701

Dear Mr. Fleming:

Re: Disposal of Water from Excavation

You have requested that we review your proposal to dispose of waters recovered from your excavation at First Street and Congress Avenue in Austin, Texas. It is our understanding that domestic wastewater treatment plants under consideration for receiving the water are the Doyle Hickerson Windmere plant, permit number 11931-01, and the Barton Creek West WCS plant operated by Aqua and Associates, permit number 12786-01. In either case, you would settle the water in a tank at your Congress at First Street site and truck the water to the treatment plant. You have also proposed to pretreat the water at the Barton Creek site, if this site is selected, by passing it through an activated carbon column prior to mixing it with the domestic wastewater. The spent carbon would be disposed of at an approved facility or sent back to the vendor for recovery.

As long as there is sufficient capacity in the wastewater treatment plant which you select, we have no objection to your implementing the above outlined plan for local treatment. However, we request that you test the quality of every other load of water hauled from your settling tank for total volatile organics to make sure that the trend toward improving quality does not reverse.

Please keep us informed of your decisions and of the results.

Sincerely,

Thomas G. Mason
Director
Water Quality Division

RFS:lgp

cc: TWC District 14
Windmere Utility Company
Aqua and Associates

TEXAS WATER COMMISSION
Lincoln Prop. Corp.
ROBERT F. SILVUS, P.E.
Head
Industrial Wastewater Unit

Stephen F. Austin Building
1700 North Congress Avenue
512/463-8200

P.O. Box 13087
Capitol Station
Austin, Texas 78711-3087

Attachment I

Texas Water Commission

INTEROFFICE MEMORANDUM

TO : Tommy Mason, Division Director,
Water Quality Division

DATE: May 12, 1986

THRU :

FROM : Robert W. Phillips, Field Investigator,
District 14 Field Office

SUBJECT: Lincoln Property Company, 100 Congress Avenue Site

Attached are analysis results of samples collected from (1) ground water seepage at the 100 Congress Avenue Site and (2) Town Lake.

The ground water was collected directly from the seepage collection sump in the basement of the building (bottom floor of the parking garage). Samples were also collected from Town Lake along the north store at three locations.

No priority pollutants or listed hazardous wastes were found in any of the samples collected. The only compounds identified were (1) benzo (b) thiophene, 3.6 micrograms/liter in the sample collected from the ground water seepage and (2) 2 - butoxyethanol, 9.0 micrograms/liter in the sample collected from Town Lake near the Congress Avenue bridge.

COD and TOC were somewhat elevated in the ground water seepage (COD = 380 mg/l; TOC = 90 mg/l). The recommended treatment proposed by Radian Corporation consists of primary sedimentation followed by activated carbon filtration. This treatment would reduce COD and TOC to background levels.

A copy of Radian's report dated March 1986 is available in the District Office.

Robert W Phillips
Robert W. Phillips

Approval: John Young
Wm. John Young

RWP:sjf

cc: Max Woodfin, Executive Director's Office, Texas Water Commission

TEXAS DEPARTMENT OF WATER RESOURCES TDWR-0649

NO. SW 08004

District 24 Org. No. ~~9059~~ 324 RWP Work No. 9059 Lab TDH

Site Name Lincoln Property Company

Site Location Congress & 1st Street Austin, Tx on the west corner of Congress

County Travis Basin Colorado

Method of Collection Lowered a PVC Bailer on a rope RWP & poured sample into an acetone rinsed glass jar with a teflon liner

Point of Collection Sump in basement (Parking lot under building) of the Building

Type facility ☐ Drum; ☐ Tank; ☐ Impoundment; ☐ Landfill ☐ Waste pile; ☐ Landfarm; ☒ Other Groundwater seepage

Time Collected 10:10 (am) pm) Date ~~Shipped~~ delivered 3/20/86

Add. COC =

ODOR; ☐ Yes; ☐ No; Describe Not Evaluated

S.W. Registration	Permit Number	Page No.		Date Mo.	Day	Yr.	
1 – 9	10 – 18	19 – 21	22	23 24	25 26	27 28	29
			B	0 3	2 0	8 6	0

Robert W Phillips
(Collector's Signature)

30 Code	35 Parameter Value	44 Code	49 Parameter Value	58 Code	63 Parameter Value 71

TEXAS DEPARTMENT OF WATER RESOURCES TDWR-0649

NO. SW 08004

338

District ~~24~~ Org. No. 324 Work No. 9059 Lab TDH

Lab Only — Date rec'd: MAR 20 '86 [redacted]

Date: ... 02 '86

Analyst sign.: Carl Hughey

Material Sampled: ☐ Solid waste (W); ☐ Liquid waste (L); ☐ Soil (E); ☐ Well (M); ☐ Stream (S); ☒ Other (O) Groundwater seepage to a sump

Comments Semi-volatile analysis Please include check for Benzenes & Styrenes

1qt

(continued on back)

Preservation: ☒ None; ☐ Ice; ☐ H_2SO_4; ☐ HNO_3

Other

Auxiliary Tags

☐ LEACHATE: __ EP Toxicity Series; __ TDWR

30 Code	35 Parameter Value	44 Code	49 Parameter Value	58 Code	63 Parameter Value 71
~~pH~~					
0 0 4 0 3					
~~COD~~					
0 0 3 4 0					
~~TOC~~					
0 0 6 8 0					
GC/MS					

N-PRIORITY POLLUTANT PEAKS
RY. QUANTITATION AS D10-ANTHRACEN
AS APPROXIMATE.

APPROXIMATE CONCENTRATIONS
AS D-10 ANTHRACENE
(✓) MICROGRAMS/LITER
( ) MILLIGRAMS/KILOGRAM

3.6

N-NITROSO-DI-N-PROPYLAMINE
NITROBENZENE
ISOPHORONE

DIETHYL PHTHALATE
DIPHENYLAMINE

BIS(2-ETHYLHEXYL)PHTHALATE
DI-n-OCTYL PHTHALATE

EPA PRIORITY POLLUTANTS

C. HEGBERG

DATE: 4/21/86

TDH SAMPLE NUMBER: G14 748
TWC SAMPLE NUMBER: SW0 5004

*DETECTION LIMITS ARE APPROXIMATE

SAMPLE TYPE: WATER

SAMPLE CONDITION: INTACT

ACID EXTRACTABLES IN (CHECK ONE) (✓) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
PHENOL	<20	4-CHLORO-3-CRESOL	<20	4-NITROPHENOL	<40
CHLOROPHENOL	"	2,4,6-TRICHLOROPHENOL	"	2,6-DINITRO-2-CRESOL	"
2-NITROPHENOL	"	2,4-DIMETHYLPHENOL	trace	PENTACHLOROPHENOL	"
2,4-DICHLOROPHENOL	"	2,4-DINITROPHENOL	<40		

BASE NEUTRAL EXTRACTABLES IN (CHECK ONE) (✓) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
N-NITROSO-N-DIMETHYLAMINE	<10	ACENAPHTHYLENE	<10	FLUORANTHENE	<10
bis-(2-CHLOROETHYL) ETHER	"	DIMETHYL PHTHALATE	"	PYRENE	"
1,3-DICHLOROBENZENE	"	2,6-DINITROTOLUENE	"	BENZIDINE	"
1,4-DICHLOROBENZENE	"	ACENAPHTHENE	"	BUTYLBENZYL PHTHALATE	"
1,2-DICHLOROBENZENE	"	2,4-DINITROTOLUENE	"	BENZ(a)ANTHRACENE	"
bis-(2-CHLOROISOPROPYL) ETHER	"	FLUORENE	"	CHRYSENE	"
HEXACHLOROETHANE	"	4-CHLOROPHENYL PHENYL ETHER	"	3,3'-DICHLOROBENZIDINE	"
N-NITROSO-Di-n-PROPYLAMINE	"	DIETHYL PHTHALATE	"	bis-(2-ETHYLHEXYL)PHTHALATE	"
NITROBENZENE	"	DIPHENYLAMINE	"	DI-n-OCTYL PHTHALATE	"
ISOPHORONE	"	N-NITROSODIPHENYLAMINE	"	BENZO(j)FLUORANTHENE	"
bis-(2-CHLOROETHOXY)METHANE	"	1,2-DIPHENYLHYDRAZINE	"	BENZO(k)FLUORANTHENE	"
1, 2, 4-TRICHLOROBENZENE	"	4-BROMOPHENYL PHENYL ETHER	"	BENZO(a)PYRENE	"
NAPHTHALENE	"	HEXACHLOROBENZENE	"	INDENO(1,2,3-cd)PYRENE	"
HEXACHLOROBUTADIENE	"	PHENANTHRENE	"	DIBENZ(a,h)ANTHRACENE	"
HEXACHLOROCYCLOPENTADIENE	"	ANTHRACENE	"	BENZO(ghi)PERYLENE	"
2-CHLORONAPHTHALENE	"	DI-n-BUTYL PHTHALATE	"		

PESTICIDES IN (CHECK ONE) (✓) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
alpha-BHC	<20	ALDRIN	<20	beta-ENDOSULFAN	<40
gamma-BHC	"	4-4'-DDE	"	ENDOSULFAN SULFATE	<40
beta-BHC	"	DIELDRIN	"	ENDRIN	<20
delta-BHC	"	4,4'-DDD	"	alpha-ENDOSULFAN	<40
HEPTACHLOR	"	4,4'-DDT	"	HEPTACHLOR EPOXIDE	<20
ENDRIN ALDEHYDE	"				

VOLATILE ORGANICS IN (CHECK ONE) (✓) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
CHLOROMETHANE	<2	1,2-DICHLOROETHANE	<2	1,1,2-TRICHLOROETHANE	<2
BROMOMETHANE	"	CARBON TETRACHLORIDE	"	2-CHLOROETHYLVINYL ETHER	"
VINYL CHLORIDE	"	BROMODICHLOROMETHANE	"	TRICHLOROETHYLENE	"
CHLOROETHANE	"	BENZENE	"	BROMOFORM	"
TRICHLOROFLUOROMETHANE	"	DIBROMOCHLOROMETHANE	"	TOLUENE	"
CHLOROFORM	"	1,1,1-TRICHLOROETHANE	"	ETHYLBENZENE	"
METHYLENE CHLORIDE	"	1,2-DICHLOROPROPANE	"	1,1,2,2-TETRACHLOROETHANE	"
1,1-DICHLOROETHYLENE	"	trans-1,3-DICHLOROPROPYLENE	"	TETRACHLOROETHYLENE	"
1,1-DICHLOROETHANE	"	cis-1,3-DICHLOROPROPYLENE	"	CHLOROBENZENE	"
trans-1,2 DICHLOROETHYLENE	"				

BY COMPARISON WITH EPA/NIH MASS SPECTRAL LIBRARY. QUANTITATION AS D10-ANTHRACENE IS PROVIDED, AND THE VALUES SHOULD BE REGARDED AS APPROXIMATE.

TENTATIVE COMPOUND IDENTIFICATION	APPROXIMATE CONCENTRATIONS: AS D-10 ANTHRACENE (✓) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM
benzo (b) thiophene	3.6

COMMENTS AND OTHER REQUESTED ANALYSES:

WRONG CONTAINER FOR VOA

NO STYRENE FOUND (< 2 µg/L) BY VOA

SIGNATURE

DATE

1/86

TEXAS DEPARTMENT OF WATER RESOURCES

NO. SW 08005

Site Name Lincoln Property Company

Site Location Congress & 1st Street Austin, Tx on the west corner of Congress

County Travis Basin Colorado

Method of Collection Lowered a PVC Bailer on a rope & poured sample into a sub-container

Point of Collection Sump in basement (Parking lot under building) of the Building

Type Facility: ☐ Drum; ☐ Tank; ☐ Impoundment; ☐ Landfill ☐ Waste pile; ☐ Landfarm; ☒ Other Ground water Seepage

Time Collected 10:10 (am, pm) Date Shipped

Add. COC #

ODOR ☐ Yes; ☐ No; Describe Not Evaluated

RECEIVED MAY 07 '86 DISTRICT 14 OPERATIONS

Robert W. Phillips
(Collector's Signature)

S.W. Registration	Permit Number	Page No.	Date (Mo. Day Yr.)
9 10	15 19 21 22	23 24	25 26 27 28 29
		0 1	0 3 2 6

30 Code	35 Parameter Value	44 Code	49 Parameter Value	58 Code	63 Parameter Value 71

TEXAS DEPARTMENT OF WATER RESOURCES TDWR-0849

NO. SW 08005

338

District 24 Org. No. 324 Work No. 3029 Lab TDH

Material Sampled: ☐ Solid waste (W); ☐ Liquid waste (L); ☐ Soil (E); ☐ Well (M); ☐ Stream (S); ☒ Other (O) Ground water seepage to a sump

Comments

(continued on back)

Lab Only — Date rec'd MAR 20 '86; date APR 29 '86; Analyst sign.:

Preservation: ☐ None; ☐ Ice; ☒ H_2SO_4; ☐ HNO_3 Other

Auxiliary Tags

☐ LEACHATE: EP Toxicity Series: TDWR

30 Code	35 Parameter Value	44 Code	49 Parameter Value	58 Code	63 Parameter Value 71
00403					
COD 00340	380				
TOC 00680	90				

TEXAS DEPARTMENT OF WATER RESOURCES TDWR-0849

NO. SW 09251

District 24 Org. No 324 Work No. 9092 Lab TDH

Site Name Lincoln Property Co.

Site Location [illegible] 1st Street, Austin, Texas

County Travis Basin Colorado 1428

Method of Collection Glass beaker on the [illegible] ; [illegible] sample.

Point of Collection Town Lake @ Festival Beach just west of the loading ramp on the North Shore.

Type facility: ☐ Drum; ☐ Tank; ☐ Impoundment; ☐ Landfill ☐ Waste pile; ☐ Landfarm; ☒ Other

Time Collected 11:55 (am) pm) Date ~~Shipped~~ delivered 3/21/86

Add. COC #s

ODOR ☐ Yes; ☒ No; Describe

S.W. Registration (1–9)	Permit Number (10–18)	Page No. (19–21)	(22)	Date Mo. (23–24)	Day (25–26)	Yr. (27–28)	(29)
			3	03	21	86	5

Robert W. Phillips
(Collector's Signature)

30 Code	35 Parameter Value	44 Code	49 Parameter Value	58 Code	63 Parameter Value 71

TEXAS DEPARTMENT OF WATER RESOURCES TDWR-0849

NO. SW 09251

District 24 Org. No 324 Work No. 9092 Lab TDH

Material Sampled: ☐ Solid waste (W); ☐ Liquid waste (L); ☐ Soil (E); ☐ Well (M); ☒ Stream (S); ☐ Other (O)

Comments

1qt.

(continued on back)

Lab Use Only — Date rec'd: MAR 21 '86 [redacted]

compltd: 4 16 '86

Analyst sign.: B. Gill

Preservation: ☒ None; ☐ Ice; ☐ H_2SO_4; ☐ HNO_3

Other

Auxiliary Tags

☐ LEACHATE: __ EP Toxicity Series; __ TDWR

30 Code	35 Parameter Value	44 Code	49 Parameter Value	58 Code	63 Parameter Value 71
~~pH~~					
00403					
~~COD~~					
00340					
~~TOC~~					
00680					
(GC/MS)					

-PRIORITY POLLUTANT PEAKS
RY. QUANTITATION AS D10-ANTHRA
AS APPROXIMATE.

APPROXIMATE CONCENTRATIO
AS D-10 ANTHRACENE
( ) MICROGRAMS/LITER
( ) MILLIGRAMS/KILOGRA

TEXAS DEPARTMENT OF HEALTH
GC/MS ANALYSIS REPORT
EPA PRIORITY POLLUTANTS

ANALYST: CARL HOGBERG DATE: 4/15/86

TDH SAMPLE NUMBER EH6-762
TWC SAMPLE NUMBER SW 09251

* DETECTION LIMITS ARE APPROXIMATE

SAMPLE TYPE: WATER

SAMPLE CONDITION:

ACID EXTRACTABLES IN (CHECK ONE) (✓) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
PHENOL	<10	4-CHLORO-3-CRESOL	<10	4-NITROPHENOL	<50
CHLOROPHENOL		2,4,6-TRICHLOROPHENOL		2,6-DINITRO-3-CRESOL	
2-NITROPHENOL		2,4-DIMETHYLPHENOL		PENTACHLOROPHENOL	
2,4-DICHLOROPHENOL		2,4-DINITROPHENOL	<50		

BASE NEUTRAL EXTRACTABLES IN (CHECK ONE) (✓) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
N-NITROSO-N-DIMETHYLAMINE	<5	ACENAPHTHYLENE	<5	FLUORANTHENE	<5
[redacted]2-CHLOROETHYL ETHER		DIMETHYL PHTHALATE		PYRENE	
[redacted]DICHLOROBENZENE		2,6-DINITROTOLUENE		BENZIDINE	
1,4-DICHLOROBENZENE		ACENAPHTHENE		BUTYLBENZYL PHTHALATE	
1,2-DICHLOROBENZENE		2,4-DINITROTOLUENE		BENZ(a)ANTHRACENE	
bis-2-CHLOROISOPROPYL ETHER		FLUORENE		CHRYSENE	
HEXACHLOROETHANE		4-CHLOROPHENYL PHENYL ETHER		3,3'-DICHLOROBENZIDINE	
N-NITROSO-Di-n-PROPYLAMINE		DIETHYL PHTHALATE		bis-(2-ETHYLHEXYL)PHTHALATE	
NITROBENZENE		DIPHENYLAMINE		DI-n-OCTYL PHTHALATE	
ISOPHORONE		N-NITROSODIPHENYLAMINE		BENZO(j)FLUORANTHENE	
bis-(2-CHLOROETHOXY) METHANE		1,2-DIPHENYLHYDRAZINE		BENZO(k)FLUORANTHENE	
1,2,4-TRICHLOROBENZENE		4-BROMOPHENYL PHENYL ETHER		BENZO(a)PYRENE	
NAPHTHALENE		HEXACHLOROBENZENE		INDENO(1,2,3-cd)PYRENE	
HEXACHLOROBUTADIENE		PHENANTHRENE		DIBENZ(a,h)ANTHRACENE	
HEXACHLOROCYCLOPENTADIENE		ANTHRACENE		BENZO(ghi)PERYLENE	
2-CHLORONAPHTHALENE		DI-n-OCTYL PHTHALATE			

PESTICIDES IN (CHECK ONE) (✓) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
alpha-BHC	<10	ALDRIN	<10	beta-ENDOSULFAN	<20
gamma-BHC		4-4'-DDE		ENDOSULFAN SULFATE	
beta-BHC		DIELDRIN		ENDRIN	
[redacted]BHC		4,4'-DDD		alpha-ENDOSULFAN	
HEPTACHLOR		4,4'-DDT		HEPTACHLOR EPOXIDE	
ENDRIN ALDEHYDE					

VOLATILE ORGANICS I* (CHECK ONE) ( ) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
CHLOROMETHANE		1,2-DICHLOROETHANE		1,1,2-TRICHLOROETHANE	
BROMOMETHANE		CARBON TETRACHLORIDE		2-CHLOROETHYLVINYL ETHER	
VINYL CHLORIDE		BROMODICHLOROMETHANE		TRICHLOROETHYLENE	
CHLOROETHANE		BENZENE		BROMOFORM	
TRICHLOROFLUOROMETHANE		DIBROMOCHLOROMETHANE		TOLUENE	
CHLOROFORM		1,1,1-TRICHLOROETHANE		ETHYLBENZENE	
METHYLENE CHLORIDE		1,2-DICHLOROPROPANE		1,1,2,2-TETRACHLOROETHANE	
1,1-DICHLOROETHYLENE		trans-1,3-DICHLOROPROPYLENE		TETRACHLOROETHYLENE	
1,1-DICHLOROETHANE		cis-1,3-DICHLOROPROPYLENE		CHLOROBENZENE	
trans-1,2 DICHLOROETHYLENE					

TENTATIVE IDENTIFICATION OF THE TEN LARGEST NON-PRIORITY POLLUTANT PEAKS BY COMPARISON WITH EPA/NIH MASS SPECTRAL LIBRARY. QUANTITATION AS DIO-ANTHRACEN IS PROVIDED, AND THE VALUES SHOULD BE REGARDED AS APPROXIMATE.

TENTATIVE COMPOUND IDENTIFICATION	APPROXIMATE CONCENTRATION: AS D-10 ANTHRACENE ( ) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM
none	

COMMENTS AND OTHER REQUESTED ANALYSES:

SIGNATURE: Richard A. Albert DATE: 4/15/86

1/86

Site Name [illegible]

Site Location [illegible] 1st Street [illegible]

County Travis Basin [illegible] 1227

Method of Collection Grab [illegible] Sample

Point of Collection [illegible]

[illegible] Shore

Type facility: ☐ Drum; ☐ Tank; ☐ Impoundment; ☐ Landfill; ☐ Wastepile; ☐ Landfarm; ☒ Other

Time Collected 11:55 (am) pm Date ~~Shipped~~ delivered 3/21/86

Add. COC #s

ODOR: ☐ Yes; ☒ No; Describe

S.W. Registration	Permit Number	Page No.		Date Mo.	Day	Yr.	
1 – 9	10 – 18	19 – 21	22	23 24	25 26	27 28	29
			3	0 3	2 1	8 6	5

Robert W. Phillips
(Collector's Signature)

30 Code	35 Parameter Value	44 Code	49 Parameter Value	58 Code	63 Parameter Value 71

TEXAS DEPARTMENT OF WATER RESOURCES TDWR-0849

NO. SW 09252

District: 24 Org. No. 324 Work No. 9092 Lab TDH

Material Sampled: ☐ Solid waste (W); ☐ Liquid waste (L); ☐ Soil (E); ☐ Well (M); ☒ Stream (S); ☐ Other (O)

Comments

9+.

(continued on back)

Lab Only — Date: recd. MAR 21 '86; compl. APR 16 '86 [redacted]

Analyst sign.: [illegible]

Preservation: ☐ None; ☐ Ice; ☒ H_2SO_4; ☐ HNO_3

Other

Auxiliary Tags

☐ LEACHATE: ___ EP Toxicity Series: ___ TDWR

30 Code	35 Parameter Value	44 Code	49 Parameter Value	58 Code	63 Parameter Value 71
~~pH~~					
0 0 4 0 3					
COD					
0 0 3 4 0	11				
TOC					
0 0 6 8 0	4				
~~SUMS~~					

TEXAS DEPARTMENT OF WATER RESOURCES TDWR-0849

NO. SW 09253 District 24 Org. No. 324 Work No. 9092 Lab TDH

Site Name Lincoln Property Co.

Site Location Congress & 1st St, Austin, Tx

County Travis Basin Colorado 1429

Method of Collection Glass beaker on the end of a pond sampler.

Point of Collection Town Lake @ Congress Avenue on the west side of the bridge on the North Shore

Type facility: ☐ Drum; ☐ Tank; ☐ Impoundment; ☐ Landfill ☐ Waste pile; ☐ Landfarm; ☒ Other

Time Collected 11:20 (am) pm) Date ~~Shipped~~ delivered 3/21/86

Add. COC #s

ODOR: ☐ Yes; ☒ No; Describe

S.W. Registration (9)	Permit Number (10–18)	Page No. (19–21)	(22)	Date Mo. (23–24)	Day (25–26)	Yr. (27–28)	(29)
			B	0 3	2 1	8 6	S

Robert W. Phillips
(Collector's Signature)

30 Code	35 Parameter Value	44 Code	49 Parameter Value	58 Code	63 Parameter Value 71

TEXAS DEPARTMENT OF WATER RESOURCES TDWR-0849

NO. SW 09253

District 14 Org. No. 324 Work No. 9092 Lab TDH

Material Sampled: ☐ Solid waste (W); ☐ Liquid waste (L); ☐ Soil (E); ☐ Well (M); ☒ Stream (S); ☐ Other (O)

Comments

10x

(continued on back)

Lab Only — Date rec'd MAR 21 '86; compltd [illegible] 16 '86; Analyst sign.: [illegible] [redacted]

Preservation: ☒ None; ☐ Ice; ☐ H_2SO_4; ☐ HNO_3

Other

Auxiliary Tags

☐ LEACHATE: ___ EP Toxicity Series; ___ TDWR

30 Code	35 Parameter Value	44 Code	49 Parameter Value	58 Code	63 Parameter Value 71
~~pH~~					
0 0 4 0 3					
~~COD~~					
0 0 3 4 0					
~~TOC~~					
0 0 6 8 0					
(GC/MS)					

-PRIORITY POLLUTANT PEAKS
Y. QUANTITATION AS D10-ANTHRA[illegible]
AS APPROXIMATE.

APPROXIMATE CONCENTRATION[illegible]
AS D-10 ANTHRACENE
(✓) MICROGRAMS/LITER
( ) MILLIGRAMS/KILOGRAM[illegible]

9

GC/MS ANALYSIS REPORT
EPA PRIORITY POLLUTANTS

...BERG DATE: 4/15/86

TDH SAMPLE NUMBER EH6-761
TWC SAMPLE NUMBER SW09253

...LIMITS ARE APPROXIMATE

SAMPLE TYPE: WATER

SAMPLE CONDITION: INTACT

ACID EXTRACTABLES IN (CHECK ONE) (✓) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
PHENOL	<15	4-CHLORO-3-CRESOL	<15	4-NITROPHENOL	<30
CHLOROPHENOL		2,4,6-TRICHLOROPHENOL		2,6-DINITRO-2-CRESOL	
2-NITROPHENOL		2,4-DIMETHYLPHENOL		PENTACHLOROPHENOL	
2,4-DICHLOROPHENOL		2,4-DINITROPHENOL	<30		

BASE NEUTRAL EXTRACTABLES IN (CHECK ONE) (✓) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
N-NITROSO-N-DIMETHYLAMINE	<5	ACENAPHTHYLENE	<5	FLUORANTHENE	<5
bis-(2-CHLOROETHYL) ETHER		DIMETHYL PHTHALATE		PYRENE	
1,3-DICHLOROBENZENE		2,6-DINITROTOLUENE		BENZIDINE	
1,4-DICHLOROBENZENE		ACENAPHTHENE		BUTYLBENZYL PHTHALATE	
1,2-DICHLOROBENZENE		2,4-DINITROTOLUENE		BENZ(a)ANTHRACENE	
bis-(2-CHLOROISOPROPYL) ETHER		FLUORENE		CHRYSENE	
HEXACHLOROETHANE		4-CHLOROPHENYL PHENYL ETHER		3,3'-DICHLOROBENZIDINE	
N-NITROSO-DI-n-PROPYLAMINE		DIETHYL PHTHALATE		bis-(2-ETHYLHEXYL)PHTHALATE	
NITROBENZENE		DIPHENYLAMINE		DI-n-OCTYL PHTHALATE	
ISOPHORONE		N-NITROSODIPHENYLAMINE		BENZO(j)FLUORANTHENE	
bis-(2-CHLOROETHOXY) METHANE		1,2-DIPHENYLHYDRAZINE		BENZO(b)FLUORANTHENE	
1,2,4-TRICHLOROBENZENE		4-BROMOPHENYL PHENYL ETHER		BENZO(a)PYRENE	
NAPHTHALENE		HEXACHLOROBENZENE		INDENO(1,2,3-cd)PYRENE	
HEXACHLOROBUTADIENE		PHENANTHRENE		DIBENZ(a,h)ANTHRACENE	
HEXACHLOROCYCLOPENTADIENE		ANTHRACENE		BENZO(ghi)PERYLENE	
2-CHLORONAPHTHALENE		DI-n-BUTYL PHTHALATE			

PESTICIDES IN (CHECK ONE) (✓) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
alpha-BHC	<15	ALDRIN	<15	beta-ENDOSULFAN	<30
gamma-BHC		4-4'-DDE		ENDOSULFAN SULFATE	
beta-BHC		DIELDRIN		ENDRIN	
[illegible]-BHC		4,4'-DDD		alpha-ENDOSULFAN	
[illegible]ACHLOR		4,4'-DDT		HEPTACHLOR EPOXIDE	
ENDRIN ALDEHYDE					

VOLATILE ORGANICS IN (CHECK ONE) ( ) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
CHLOROMETHANE		1,2-DICHLOROETHANE		1,1,2-TRICHLOROETHANE	
BROMOMETHANE		CARBON TETRACHLORIDE		2-CHLOROETHYLVINYL ETHER	
VINYL CHLORIDE		BROMODICHLOROMETHANE		TRICHLOROETHYLENE	
CHLOROETHANE		BENZENE		BROMOFORM	
TRICHLOROFLUOROMETHANE		DIBROMOCHLOROMETHANE		TOLUENE	
CHLOROFORM		1,1,1-TRICHLOROETHANE		ETHYLBENZENE	
METHYLENE CHLORIDE		1,2-DICHLOROPROPANE		1,1,2,2-TETRACHLOROETHANE	
1,1-DICHLOROETHYLENE		trans-1,3-DICHLOROPROPYLENE		TETRACHLOROETHYLENE	
1,1-DICHLOROETHANE		cis-1,3-DICHLOROPROPYLENE		CHLOROBENZENE	
trans-1,2-DICHLOROETHYLENE					

TENTATIVE IDENTIFICATION OF THE TEN LARGEST NON-PRIORITY POLLUTANT PEAKS BY COMPARISON WITH EPA/NIH MASS SPECTRAL LIBRARY. QUANTITATION AS D10-ANTHRACENE IS PROVIDED, AND THE VALUES SHOULD BE REGARDED AS APPROXIMATE.

TENTATIVE COMPOUND IDENTIFICATION	APPROXIMATE CONCENTRATION AS D-10 ANTHRACENE (✓) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM
2-butoxyethanol	9

COMMENTS AND OTHER REQUESTED ANALYSES:

SIGNATURE: Richard A. Albert DATE: 4/15/86

1/86

TEXAS DEPARTMENT OF WATER RESOURCES

NO. SW 09254

District 24 Org. No. 324 Work No. 9092 Lab TDH

Site Name Lincoln Property Co.

Site Location Congress & 1st St. Austin, Tx

County Travis Basin Colorado 1429

Method of Collection Glass beaker on the end of a pond sampler.

Point of Collection Town Lake @ Congress Ave. [illegible] west side of the bridge on the North shore.

Type facility: ☐ Drum; ☐ Tank; ☐ Impoundment; ☐ Landfill ☐ Waste pile; ☐ Landfarm; ☒ Other

Time Collected 11:20 (am) pm Date ~~Shipped~~ delivered 3/21/86

Add. COC #

ODOR: ☐ Yes; ☒ No; Describe

S.W. Registration	Permit Number	Page No.		Date Mo.	Day	Yr.	
1 – 9	10 – 18	19 – 21	22	23 24	25 26	27 28	29
			B	0 3	2 1	8 6	5

Robert W. Phillips
(Collector's Signature)

30 Code	35 Parameter Value	44 Code	49 Parameter Value	58 Code	63 Parameter Value 71

TEXAS DEPARTMENT OF WATER RESOURCES TDWR-0849

NO. SW 09254

District 24 Org. No. ~~[illegible]~~ 324 Work No. 9092 Lab TDH

Material Sampled: ☐ Solid waste (W); ☐ Liquid waste (L); ☐ Soil (E); ☐ Well (M); ☒ Stream (S); ☐ Other (O)

Comments

10.

(continued on back)

Lab Only — Date rec'd: MAR 21 '86 — cmpl'd: [illegible] 11 '86 — [redacted]

Analyst sign.: ML

Preservation: ☐ None; ☐ Ice; ☒ H_2SO_4; ☐ HNO_3

Other

Auxiliary Tags

☐ LEACHATE: ___ EP Toxicity Series; ___ TDWR

30 Code	35 Parameter Value	44 Code	49 Parameter Value	58 Code	63 Parameter Value 71
~~[illegible]~~ 00403					
COD 00340	14				
TOC 00680	5				
~~GCMS~~					

TEXAS DEPARTMENT OF WATER RESOURCES TDWR-0849

NO. SW 09255

District 24 Org. No. 324 Work No. 9092 Lab TDH

Site Name Lincoln Property Co.

Site Location Congress & 1st St, Austin, TX

County Travis Basin Colorado 1429

Method of Collection Glass beaker on the end of a pond sampler

Point of Collection Town Lake at Shoal Cr. 25 yards east of the water plant intake on the North Shore

Type facility: ☐ Drum; ☐ Tank; ☐ Impoundment; ☐ Landfill; ☐ Waste pile; ☐ Landfarm; ☒ Other

Time Collected 11:00 (am, pm) Date ~~Shipped~~ delivered 3/21/86

Add. COC #:

ODOR: ☐ Yes; ☒ No; Describe

S.W. Registration (1–9)	Permit Number (10–18)	Page No. (19–21)	22	Date Mo. (23–24)	Day (25–26)	Yr. (27–28)	29
			B	03	21	86	S

Robert W. Phillips
(Collector's Signature)

30 Code	35 Parameter Value	44 Code	49 Parameter Value	58 Code	63 Parameter Value 71

TEXAS DEPARTMENT OF WATER RESOURCES TDWR-0849

NO. SW 09255

District ~~24~~ Org. No. 324 Work No. 9092 Lab TDH

Material Sampled: ☐ Solid waste (W); ☐ Liquid waste (L); ☐ Soil (E); ☐ Well (M); ☒ Stream (S); ☐ Other (O)

Comments

(continued on back)

Lab Only — Date rec'd MAR 21 '86 [redacted]
Date compl. APR 16 '86
Analyst sign.:

Preservation: ☒ None; ☐ Ice; ☐ H_2SO_4; ☐ HNO_3

Other

Auxiliary Tags

☐ LEACHATE:___ EP Toxicity Series;___ TDWR

30 Code	35 Parameter Value	44 Code	49 Parameter Value	58 Code	63 Parameter Value 71
~~pH~~ 00403					
~~COD~~ 00340					
~~TOC~~ 00680					
GC/MS					

-PRIORITY POLLUTANT PEAKS
Y. QUANTITATION AS D10-ANTHRACENE AS APPROXIMATE.

APPROXIMATE CONCENTRATIONS AS D-10 ANTHRACENE
( ) MICROGRAMS/LITER
( ) MILLIGRAMS/KILOGRAM

NITROBENZENE DIPHENYLAMINE DI-n-OCTYL PHTHALATE

GC/MS ANALYSIS REPORT
EPA PRIORITY POLLUTANTS

[redacted] HOGBERG DATE: 4/15/86

TDH SAMPLE NUMBER: EH6-763
TWC SAMPLE NUMBER: SW4255

DETECTION LIMITS ARE APPROXIMATE

SAMPLE TYPE: WATER

SAMPLE CONDITION:

ACID EXTRACTABLES IN (CHECK ONE) (✓) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
PHENOL	<15	4-CHLORO-3-CRESOL	<15	4-NITROPHENOL	<30
CHLOROPHENOL	...	2,4,6-TRICHLOROPHENOL	...	2,6-DINITRO-2-CRESOL	...
2-NITROPHENOL	...	2,4-DIMETHYLPHENOL	...	PENTACHLOROPHENOL	...
2,4-DICHLOROPHENOL	...	2,4-DINITROPHENOL	<30		

BASE NEUTRAL EXTRACTABLES IN (CHECK ONE) (✓) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
N-NITROSO-N-DIMETHYLAMINE	<5	ACENAPHTHYLENE	<5	FLUORANTHENE	<15
bis-([redacted]LOROETHYL) ETHER	...	DIMETHYL PHTHALATE	...	PYRENE	...
1,3-DICHLOROBENZENE	...	2,6-DINITROTOLUENE	...	BENZIDINE	...
1,4-DICHLOROBENZENE	...	ACENAPHTHENE	...	BUTYLBENZYL PHTHALATE	...
1,2-DICHLOROBENZENE	...	2,4-DINITROTOLUENE	...	BENZ(a)ANTHRACENE	...
bis-(2-CHLOROISOPROPYL ETHER	...	FLUORENE	...	CHRYSENE	...
HEXACHLOROETHANE	...	4-CHLOROPHENYL PHENYL ETHER	...	3,3'-DICHLOROBENZIDINE	...
N-NITROSO-DI-n-PROPYLAMINE	...	DIETHYL PHTHALATE	...	bis-(2-ETHYLHEXYL)PHTHALATE	...
NITROBENZENE	...	DIPHENYLAMINE	...	DI-n-OCTYL PHTHALATE	...
ISOPHORONE	...	N-NITROSODIPHENYLAMINE	...	BENZO(j)FLUORANTHENE	...
bis-(2-CHLOROETHOXY)METHANE	...	1,2-DIPHENYLHYDRAZINE	...	BENZO(k)FLUORANTHENE	...
1 2 4-TRICHLOROBENZENE	...	4-BROMOPHENYL PHENYL ETHER	...	BENZO(a)PYRENE	...
NAPHTHALENE	...	HEXACHLOROBENZENE	...	INDENO(1,2,3-cd)PYRENE	...
HEXACHLOROBUTADIENE	...	PHENANTHRENE	...	DIBENZ(a,h)ANTHRACENE	...
HEXACHLOROCYCLOPENTADIENE	...	ANTHRACENE	...	BENZO(ghi)PERYLENE	...
2-CHLORONAPHTHALENE	...	DI-n-BUTYL PHTHALATE	...		

PESTICIDES IN (CHECK ONE) (✓) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
alpha-BHC	<15	ALDRIN	<15	beta-ENDOSULFAN	<30
gamma-BHC	...	4-4'-DDE	...	ENDOSULFAN SULFATE	...
beta-BHC	...	DIELDRIN	...	ENDRIN	...
del[redacted]C	...	4,4'-DDD	...	alpha-ENDOSULFAN	...
HEPTACHLOR	...	4,4'-DDT	...	HEPTACHLOR EPOXIDE	...
ENDRIN ALDEHYDE	...				

VOLATILE ORGANICS IN (CHECK ONE) ( ) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM :

NAME	AMT	NAME	AMT	NAME	AMT
CHLOROMETHANE	...	1,2-DICHLOROETHANE	...	1,1,2-TRICHLOROETHANE	...
BROMOMETHANE	...	CARBON TETRACHLORIDE	...	2-CHLOROETHYLVINYL ETHER	...
VINYL CHLORIDE	...	BROMODICHLOROMETHANE	...	TRICHLOROETHYLENE	...
CHLOROETHANE	...	BENZENE	...	BROMOFORM	...
TRICHLOROFLUOROMETHANE	...	DIBROMOCHLOROMETHANE	...	TOLUENE	...
CHLOROFORM	...	1,1,1-TRICHLOROETHANE	...	ETHYLBENZENE	...
METHYLENE CHLORIDE	...	1,2-DICHLOROPROPANE	...	1,1,2,2-TETRACHLOROETHANE	...
1,1-DICHLOROETHYLENE	...	trans-1,3-DICHLOROPROPYLENE	...	TETRACHLOROETHYLENE	...
1,1-DICHLOROETHANE	...	cis-1,3-DICHLOROPROPYLENE	...	CHLOROBENZENE	...
trans-1,2 DICHLOROETHYLENE	...				

TENTATIVE IDENTIFICATION OF THE TEN LARGEST NON-PRIORITY POLLUTANT PEAKS BY COMPARISON WITH EPA/NIH MASS SPECTRAL LIBRARY. QUANTITATION AS DIO-ANTHRACENE IS PROVIDED, AND THE VALUES SHOULD BE REGARDED AS APPROXIMATE.

TENTATIVE COMPOUND IDENTIFICATION	APPROXIMATE CONCENTRATION: AS D-10 ANTHRACENE ( ) MICROGRAMS/LITER ( ) MILLIGRAMS/KILOGRAM
none	...
...	...
...	...
...	...
...	...
...	...
...	...
...	...
...	...
...	...

COMMENTS AND OTHER REQUESTED ANALYSES:

SIGNATURE: Richard A. Albert DATE: 4/15/86

1/86

TEXAS DEPARTMENT OF WATER RESOURCES

NO. SW 09256

Date 24 Work No. 2292 Lab TDH

Site Name [illegible]

Site Location [illegible] Austin, Tx

County Travis Basin Colorado 1232

Method of Collection [illegible]

Point of Collection Town Lake @ Shoal Ck [illegible] to the water plant intake on the North Shore

Type facility: ☐ Drum; ☐ Tank; ☐ Impoundment; ☐ Landfill ☐ Waste pile; ☐ Landfarm; ☒ Other

Time Collected 11:00 (am) pm) Date ~~Shipped~~ delivered 3-21-86

Add. COC #:

ODOR: ☐ Yes; ☒ No; Describe

S.W. Registration	Permit Number	Page No.		Date Mo.	Day	Yr.	
1 — 9	10 — 18	19 — 21	22	23 24	25 26	27 28	29
			3	0 3	2 1	8 6	5

[signature] (Collector's Signature)

30 Code	35 Parameter Value	44 Code	49 Parameter Value	58 Code	63 Parameter Value 71

TEXAS DEPARTMENT OF WATER RESOURCES TDWR-0249

NO. SW 09256

District 24 Org. No. 324 Work No. 2292 Lab TDH

Material Sampled: ☐ Solid waste (W); ☐ Liquid waste (L); ☐ Soil (E); ☐ Well (M); ☒ Stream (S); ☐ Other (C)

Comments

qt.

(continued on back)

Lab Only	Date
recd	MAR 21 '86
started	[illegible] 16 '86
[redacted] (Lab No.)	
Analyst sign.: [signature]	

Preservation: ☐ None; ☐ Ice; ☒ H_2SO_4; ☐ HNO_3

Other

Auxiliary Tags

☐ LEACHATE: __ EP Toxicity Series; __ TDWR

30 Code	35 Parameter Value	44 Code	49 Parameter Value	58 Code	63 Parameter Value 71
pH 00403					
COD 00340	16				
TOC 00680	5				
OG/MS					

Attachment J

City of Austin

Founded by Congress. Republic of Texas. 1839
Municipal Building. Eighth at Colorado. P.O. Box 1088. Austin. Texas 78767 Telephone 512/499-2000

May 23, 1986

Mr. Kevin A. Fleming
Construction Manager
Lincoln Property Company
600 Congress Avenue, Suite 2180
Austin, Texas 78701

Re: Permit for Industrial Waste Discharge

Dear Mr. Fleming:

Enclosed please find the "City of Austin Special and Conditional Industrial Waste Discharge Permit for Groundwaters from 100 Congress Avenue".

If you have any questions or suggestions concerning the enclosed, please contact either myself or Andrew P. Covar at 445-3000.

Sincerely,

James E. Thompson

James E. Thompson, P.E., Director
Water and Wastewater Utility

JET:JCL:src

cc: Andrew P. Covar

CITY OF AUSTIN

SPECIAL AND CONDITIONAL INDUSTRIAL WASTE DISCHARGE PERMIT

FOR GROUNDWATERS FROM 100 CONGRESS AVENUE

PERMIT NUMBER: 1416861 ISSUE DATE: May 21, 1986

This permit is issued to LINCOLN PROPERTY COMPANY for the discharge of PRETREATED GROUNDWATER, from the facility located at 100 Congress Avenue. This permit is valid for a period of six (6) months from issue date.

This permit may be renewed for one (1) additional six (6) month period, subject to 1) application to and 2) subsequent rejection from the Austin-Travis County Health Department, for a discharge to storm sewer.

Part I. Wastewater Disharge Limits and Reporting Requirements

A. Discharge Pretreatment Standards for Specific Parameters

The discharge shall comply with the effluent limitations specified below, with effluent concentration limits applicable to pretreated groundwater, prior to combination with normal sanitary domestic wastes.

Parameter	Maximum value (milligrams/Liter)	Sample Frequency	Sample Type
pH	6.0 to 11.0 (Units)	once/day	grab
Total Organic Carbon (TOC)	20.0	3x/week	composite
Polyaromatic Hydrocarbons (PAH)	2.0	each 3 months	composite
Total Toxic Organics (TTO)	2.0	within 30 days of permit date	composite
FLOW (Maximun)	20 gallons/minute	Metered	-
VOLUME (Maximun)	28,800 gallons/day	Metered	-

B. Definitions.

For the purposes of this permit only, the following terms and definitions shall apply: Terms not listed below will be defined using definitions from the City of Austin Industrial Waste Ordinance, and "Standard Methods for Water and Wastewaters".

B. Definitions (cont.)

"Polyaromatic Hydrocarbons" (PAH) shall mean the compounds found listed in 40CFR136 for the gas chromatography method EPA Series 610. A concentration limit expressed for PAH shall mean the sum of each listed compound, where each compound is detected at a concentration equal to, or greater than 100 micrograms/Liter.

"Total Toxic Organics" (TTO) shall mean the compounds listed in 40CFR136 for the gas chromatography EPA Series 601, 602, and 610. A concentration limit expressed for TTO shall mean the sum of each listed compound, where each compound is detected at a concentration equal to, or greater than 100 micrograms/Liter.

"Composite" shall mean the combination of grab samples, made up of discrete grabs taken equally over the number of hours discharged within a calendar day, taken at intervals one hour apart or less. The composite shall be collected so as to represent a flow proportioned sample.

C. Special Monitoring Conditions

If a sample analysis for TOC exceeds the permit limit, then the Discharger shall take a grab sample for PAH, and have analytical results reported to the City within 72 hours of Discharger notice of the TOC violation.

D. Sampling and Analytical Requirements

Sampling and analytical methods shall be used that follow protocols and procedures specified in 40CFR136, or alternate, or modified methods, acceptable to the City of Austin. A quality control report, including sample precision and accuracy testing, shall be submitted to the City of Austin within 30 days of permit date.

E. Reporting

Reports shall include all sample analytical results, a monthly average of daily flows (gallons/day), a monthly peak daily flow (gallons/day), a monthly peak daily flow rate (gallons/minutes). A statement shall be made that "all discharged groundwaters have received activated carbon pretreatment", or a statement explaining why pretreatment was not performed.

Reports shall be submitted no later than 30 days after close of each three month monitoring period, and submitted to:

City of Austin
Wastewater Treatment Division
Attention: Industrial Waste Control Section
P.O. Box 1088
Austin, Texas 78767

Emergency Conditions:

The discharger shall notify the City immediately upon any accidental or slug discharges to the sanitary sewer as outlined in the "Accidental Discharges" section of the City's Ordinance #82 1209-F, and the dischargers "Spill Prevention and Control Plan". Notification shall also be made if any discharge standard is violated in excess of 100% of the permitted discharge standard. The following telephone numbers should be used when necessary:

Industrial Waste Section	926-0316	(Mon-Fri 7:30am - 4:00pm)
Walnut Creek Lab	926-3624	"
Walnut Creek WWTP	926-7587	"
Webberville Yard (Sta#1)	480-2310	(Anytime)
Austin-Travis Co. Health Dept.	397-1600	"

Upon detection of an excursion in permit limits the discharge shall cease until the quality is again within discharge limits.

Part II. Operating Conditions

All groundwater discharged to the City sanitary sewer must receive pretreatment. Minimun pretreatment facilities must include clarification and activated carbon treatments. The discharge of any groundwater not receiving pretreatment shall be immediately reported to the City.

Flow monitoring equipment must be installed so that flow rates (in gallons per minute) may be measured and recorded.

A sample port must be provided so that the discharge may be directly observed and sampled.

Flow metering records and analytical data must be logged at the site, and be available for City inspection, at all times. Analytical data must be logged at the site within three (3) days of a laboratory report sent to the discharger.

Part III. Compliance

A "Spill Prevention and Control Plan" shall be submitted to, and approved by the City. This plan shall be followed at all times, or any deviation from that plan, shall be immediately reported to the City. The discharger is additionaly subject to all provisions of City (Industrial Waste) Ordinance #82 1209F.

James E. Thompson

James E. Thompson, P.E., Director
Water and Wastewater Utility

JET:src

Attachment K

MAY 2 7 1986

Mr. Kevin Fleming
Lincoln Property Company
600 Congress Avenue, Suite 2100
Austin, Texas 78701

Subject: Solid Waste - Travis County

Dear Mr. Fleming:

This will acknowledge receipt of a letter dated April 10, 1986, from Mr. Robert C. Wallace, Radian Corporation, concerning the disposal of the coal-tar like substance and the surrounding earth encountered in the building excavation at the corner of Second and Colorado Streets in Austin, Texas.

Although the analysis results attached to Mr. Wallace's letter indicate the material is nonhazardous, it is considered by the Department to be a special waste requiring handling in accordance with Section 325.136 (copy enclosed) of the "Municipal Solid Waste Management Regulations" (MSWMR).

It is recommended that you contact one of the local privately owned Type I landfills in the area to determine if they would be willing to accept the material in question. The landfill operator agreeing to accept the waste must then contact the Department for authorization to accept the special waste. The operator's request must outline the plan for transporting and disposal of the waste. Subsequent to the Department's approval of that plan, the disposal of the waste may begin.

In the handling of this material, contact with the skin and storage or handling in enclosed areas should be avoided.

If you have any questions concerning this letter or if we may be of any assistance to you regarding solid waste management, you may contact Leonard E. Mohrmann, Ph.D., C.P.C., of my staff in Austin at telephone number (512) 458-7271 or you may prefer to contact Mr. Charles H. Wentworth, P.E., Regional Director of Environmental and Consumer Health Protection at P.O. Box 198, Temple, Texas 76501; telephone number (817) 778-6744.

Sincerely yours,

L. B. Griffith, Jr., P.E., Director
Surveillance and Enforcement Division
Bureau of Solid Waste Management

JLB:ger
Enclosure

cc: Region 6, TDH
Austin-Travis County Health Department
Mr. Robert C. Wallace, Radian Corporation

5-19 JLG

Div Director
Bureau Chief
Forwarded

5/28/86

4/17/86
lem

RADIAN
CORPORATION

10 April 1986

TEXAS DEPARTMENT OF HEALTH
1986 APR 16 PM 2:40
BUREAU OF SOLID WASTE MANAGEMENT

L. D. Thurman, P.E.
Acting Bureau Chief
Bureau of Solid Waste Management
Texas Department of Health
1100 West 49th Street
Austin, Texas 78756-3199

Attn: Dr. Leonard E. Mohrmann

Dear Dr. Mohrmann:

This letter is confirm our telephone conversation of April 9, 1986 concerning proper disposal of a coal tar-like material deposited by the operation of coal gasification facility which operated on the corner of 2nd and Colorado Streets in Austin, Texas from the late 1880's until 1920.

As you may recall, Lincoln Property Company (LPC) is in the construction phase of an office building complex adjacent to the historical site of the coal gasification plant. LPC and Radian met with you concerning this matter on 29 July 1985. It was decided that since the contaminated soil did not produce an odor and did not exhibit properties that would require it to be handled as a hazardous waste under state and EPA regulations, these materials could be used as daily cover material at a Type I Municipal Solid Waste Disposal Site regulated by TDH. Since that time, samples of the coal tar-like waste materials have been obtained from the historical disposal pit (located beneath the concrete floor of the warehouse on the existing property) and a representative sample analyzed for hazardous characteristics (toxicity, ignitability, corrosivity, and reactivity). These test results, attached to this letter, indicate that this material also does not exhibit hazardous characteristics. In our discussions last summer, you had indicated that when the coal tar-like waste material was excavated, it and the immediately surrounding soil could be taken to a municipal landfill and that it must be buried below natural ground surface.

Please review the attached test results and, based on your review, please advise Mr. Kevin Fleming, Lincoln Property Company, 600 Congress Avenue, Suite 2180, Austin, Texas 78701, whether current regulation would prohibit disposal of these materials in a municipal landfill.

If you have any questions concerning this letter or the analysis performed by Radian, please do not hesitate to contact me at (512) 454-4797 or Mr. Kevin Fleming at (512) 499-8811.

Sincerely,

Robert C. Wallace
Project Director

cc: Kevin Fleming, LPC

8501 Mo-Pac Blvd. / P.O. Box 9948 / Austin, Texas / (512)454-4797

RADIAN CORPORATION

ATTACHMENT 1

RCRA Characterization Test Results for
Coal Tar-Like Waste Sample Obtained from
100 Congress Avenue Construction Site

RADIAN CORPORATION

PAGE 1 Analytical Serv REPORT LAB # 85-10-160
RECEIVED: 10/23/85 03/20/86 12:06:03

REPORT TO: Radian, Bl. 4, Austin
ATTEN: Robert Wallace
CLIENT: LINCOLN SAMPLES: 1
COMPANY: Lincoln Property Co.
FACILITY:

WORK ID: RCRA
TAKEN: RW
TRANS: RW
TYPE:
P. O. #: 229-025-06-10
INV. #: 6953

PREPARED BY: Radian Analytical Services
8501 MoPac Blvd.
P. O. Box 9948
Austin, Texas 78766
ATTEN:
PHONE: (512) 454-4797

CERTIFIED BY
CONTACT: GRIMSHAW

Duplicate of report of 12/05/85.

Footnotes and Comments

* Indicates a value less than 5 times the detection limit. Potential error for such low values ranges between 50 and 100%.

@ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

SAMPLE IDENTIFICATION

01 warehouse hole #1

Analytical Serv TEST CODES and NAMES used on this report

COR PH	Corrosivity
EP EXT	RCRA Extraction Procedure
EP MET	RCRA Metals
EX 509	Extraction only-5098 Herb.
EX 608	Extraction only - 608
H1RCRA	RCRA Herbicides
IGNITS	Ignitability-solids
P1RCRA	RCRA Pesticides
REACT	Reactivity

RADIAN CORPORATION

 Analytical Serv REPORT LAB # 85-10-160

RECEIVED: 10/23/85 RESULTS BY TEST

TEST CODE default units	Sample 01 (entered units)
COR_PH pH units	10.15
EP_EXT date completed	11/08/85
EX_509 date complete	11/20/85
EX_608 date complete	11/20/85
IGNITS yes/no	no
REACT + or -	-

RADIAN CORPORATION

PAGE 3 Analytical Serv REPORT LAB # 85-10-160
RECEIVED: 10/23/85 Results by Sample

SAMPLE ID warehouse hole #1 FRACTION 01C TEST CODE EP MET NAME RCRA Metals
Date & Time Collected 10/23/85 Category

DATE ANALYZED 11/13/85 VERIFIED BY QCL

CODE	METAL	RESULT	CODE	METAL	RESULT
AG	Silver	< .002	AS	Arsenic	< .06
BA	Barium	0.025	HG	Mercury	< .0002
CD	Cadmium	< .002	PB	Lead	< .08
CR	Chromium	< .005	SE	Selenium	< .08

NOTES AND DEFINITIONS FOR THIS REPORT

All results reported in ug/ml unless otherwise specified.
NA = not analyzed
* = less that 5 times the detection limit.
All elements determined by ICPES except Hg.

RADIAN CORPORATION

PAGE 4 Analytical Serv REPORT LAB # 85-10-160
RECEIVED: 10/23/85 Results by Sample

SAMPLE ID warehouse hole #1 FRACTION 01D TEST CODE H1RCRA NAME RCRA Herbicides
Date & Time Collected 10/23/85 Category

DATE EXTRACTED 11/20/85 DATE INJECTED 11/22/85 VERIFIED BY SCM
CONCENTRATION FACTOR 50 ANALYST LF

COMPOUND	RESULT	DET. LIMIT	OTHER HERBICIDES	RESULT	DET. LIMIT
2,4-D	ND	1.0			
2,4,5-TP (Silvex)	ND	0.1			

NOTES AND DEFINITIONS FOR THIS REPORT.
ND = not detected at the specified detection limit.
All results reported in micrograms/liter unless otherwise specified.

SAMPLE ID warehouse hole #1 FRACTION 01D TEST CODE P1RCRA NAME RCRA Pesticides
Date & Time Collected 10/23/85 Category

DATE EXTRACTED 11/20/85 DATE INJECTED 11/25/85 VERIFIED BY SCM
CONCENTRATION FACTOR 5 ANALYST LF

COMPOUND	RESULT	DET. LIMIT	OTHER PESTICIDES	RESULT	DET. LIMIT
Lindane	ND	0.4			
Endrin	ND	0.4			
Methoxychlor	ND	2.0			
Toxaphene	ND	20.0			

NOTES AND DEFINITIONS FOR THIS REPORT.

RADIAN CORPORATION

PAGE 5 Analytical Serv REPORT LAB # 85-10-160
RECEIVED: 10/23/85 Results by Sample Continued From Above

SAMPLE ID warehouse hole #1 FRACTION Q1D TEST CODE P1RCRA NAME RCRA Pesticides
Date & Time Collected 10/23/85 Category

ND = not detected at the specified detection limit.
All results reported in micrograms/liter unless otherwise specified.

RADIAN CORPORATION

PAGE 1 Analytical Serv REPORT LAB # 85-07-011
RECEIVED: 07/01/85 02/07/86 16:23:40

REPORT TO: Radian
Bl. 4
Austin

ATTEN: Robt. Wallace/Will Boettner

CLIENT: MAXIN SAMPLES: 3
COMPANY: Maxin Eng.
FACILITY:

PREPARED BY: Radian Analytical Services
8501 MoPac Blvd.
P.O. Box 9948
Austin, Texas 78766

ATTEN:
PHONE: (512) 454-4797

CERTIFIED BY:
CONTACT: [redacted]

WORK ID: 100 Congress Av
TAKEN: WB/RW
TRANS: WB/RW
TYPE:
P.O. #: 229-025-01-20
INV. #: 6017

Duplicate of report of 07/03/85.

Footnotes and Comments

* Indicates a value less than 5 times the detection limit. Potential error for such low values ranges between 50 and 100%.

@ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

SAMPLE IDENTIFICATION

01 #2
02 #4
#5

Analytical Serv TEST CODES and NAMES used on this report

HC IR Hydrocarbons in soil

Attachment L

Attachment L

TEST CODE default units	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)
HC_IR ug/g	27 ug/ml	2 ug/ml	13 ug/ml

REPORT TO: Radian
Bl. 4
Austin

ATTEN: Robt. Wallace/Will Boettner

CLIENT: MAXIN SAMPLES: 3
COMPANY: Maxin Eng.
FACILITY:

WORK ID: No. End of Foundation Excav.
TAKEN:
TRANS: Fed Ex. 436499766
TYPE: Oily Water
P.O. #: 229-025-01-20
INV. #: 6108

PREPARED BY: Radian Analytical Services
8501 MoPac Blvd.
P.O. Box 9948
Austin, Texas 78766
ATTEN:
PHONE: (512) 454-4797

CERTIFIED BY

CONTACT: GRIMSHAW

Duplicate of report of 07/11/85.

Footnotes and Comments

* Indicates a value less than 5 times the detection limit Potential error for such low values ranges between 50 and 100%.

@ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

SAMPLE IDENTIFICATION

03	Trip Blank VOA
11	#6
12	#7

Analytical Serv TEST CODES and NAMES used on this report

EX_625	Extraction only - 625 BN/A
IFB_BS	BNA Screen by IFB method
M625_A	Method 625 Acid Compounds
M625_B	Method 625 Base/Neutrals
MSNS_S	GCMS Characterization-ABN
MSNS_V	GCMS Characterization-VOA
MS_624	EPA Method 624/GC-MS

RADIAN CORPORATION

RESULTS BY TEST

TEST CODE / default units	Sample 11 (entered units)
EX_625 date complete	07/02/85
IFB_BS date complete	07/01/85

SAMPLE ID #6 FRACTION 11A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 07/01/85 Category

DATA FILE 2CUQ7015C11 DATE EXTRACTED 07/02/85 ANALYST WA VERIFIED BY LAK
CONC. FACTOR 11 DATE INJECTED 07/05/85 INSTRUMENT COMPOUNDS DETECTED 0

NPDES	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
11A		21A	2,4,6-trichlorophenol	ND	7A		58A	4-nitrophenol	ND
8A		22A	4-chloro-3-methylphenol	ND	9A		59A	2,4-dinitrophenol	ND
		24A	2-chlorophenol	ND	4A		60A	2-methyl-4,6-dinitrophenol	ND
2A		31A	2,4-dichlorophenol	ND	9A		64A	pentachlorophenol	ND
3A		34A	2,4-dimethylphenol	ND	10A		65A	phenol	ND
6A		57A	2-nitrophenol	ND					

SURROGATE RECOVERIES

SCAN	CODE	COMPOUND	RESULT
448	AS1	d5-phenol	33%
340	AS2	2-fluorophenol	26%
1075	AS3	2,4,6-tribromophenol	100%
	AS4	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram.
All results reported in ug/l unless otherwise specified.

SAMPLE ID #6 FRACTION 11A TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 07/01/85 Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

SAMPLE ID #6 FRACTION 11A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 07/01/85 Category

DATA FILE 2CU07015C11 DATE EXTRACTED 07/02/85 ANALYST WA VERIFIED BY LAK
CONC. FACTOR 11 DATE INJECTED 07/05/85 INSTRUMENT COMPOUNDS DETECTED 14

NPDES	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
1B	955	1B	acenaphthene	1200	41B		61B	N-nitrosodimethylamine	ND
4B		5B	benzidine	ND	43B		62B	N-nitrosodiphenylamine	ND
46B		8B	1,2,4-trichlorobenzene	ND	42B		63B	N-nitrosodi-n-propylamine	ND
33B		9B	hexachlorobenzene	ND	13B		66B	bis(2-ethylhexyl)phthalate	ND
36B		12B	hexachloroethane	ND	15B		67B	butyl benzyl phthalate	ND
11B		18B	bis(2-chloroethyl)ether	ND	26B		68B	di-butyl phthalate	ND
16B		20B	2-chloronaphthalene	ND	29B		69B	di-n-octyl phthalate	ND
20B		25B	1,2-dichlorobenzene	ND	24B		70B	diethyl phthalate	ND
21B		26B	1,3-dichlorobenzene	ND	25B		71B	dimethyl phthalate	ND
22B		27B	1,4-dichlorobenzene	ND	5B	1617	72B	benzo(a)anthracene A	720
23B		28B	3,3'dichlorobenzidine	ND	6B	1934	73B	benzo(a)pyrene	770
27B		35B	2,4-dinitrotoluene	ND	7B		74B	benzo(b)fluoranthene *	ND
28B		36B	2,6-dinitrotoluene	ND	9B	1848	75B	benzo(k)fluoranthene *	850
29B		37B	1,2-diphenylhydrazine	ND	18B	1623	76B	chrysene A	790
31B	1380	39B	fluoranthene	1700	2B	925	77B	acenaphthylene	1000
17B		40B	4-chlorophenyl phenyl ether	ND	3B	1194	78B	anthracene B	1100

SAMPLE ID #6 FRACTION 11A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 07/01/85 Category

14B		41B	4-bromophenyl phenyl ether	ND	8B	2483	79B	benzo(ghi)perylene	200
12B		42B	bis(2-chloroisopropyl)ether	ND	32B	1035	80B	fluorene	1400
10B		43B	bis(2-chloroethoxy)methane	ND	44B	1188	81B	phenanthrene B	2400
34B		52B	hexachlorobutadiene	ND	19B		82B	dibenzo(a,h)anthracene	ND
35B		53B	hexachlorocyclopentadiene	ND	37B	2353	83B	indeno(1,2,3-cd)pyrene	220
38B		54B	isophorone	ND	45B	1417	84B	pyrene	1500
39B	678	55B	naphthalene	8000					
40B		56B	nitrobenzene	ND					

SURROGATE RECOVERIES

SCAN	CODE	RESULT	
571	BS1	d5-nitrobenzene	100%
845	BS2	2-fluorobiphenyl	55%
1446	BS3	d14-terphenyl	73%
	BS4	d10-biphenyl	

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.
All results reported in ug/l unless otherwise specified.
ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
A = benzo(a)anthracene and chrysene co-elute in high concentrations.

SAMPLE ID #6 FRACTION 11A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 07/01/85 Category

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

SAMPLE ID #6 FRACTION 11A TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 07/01/85 Category

CHRO # 2CU07015C1 VERIFIED BY LAK
SAMPLE SIZE 920 ml DATE ANALYZED 07/05/85 UNITS ug/l

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
785	2-methylnaphthalene	3200		
980	dibenzofuran	260		
523	benzene, 1-propenyl-	4500		
532	1h-indene	8100		
641	cyclopropa[a]indene, 1, 1a, 6, 6a-tetra hydro	870		
648	cyclopropa[a]indene, 1, 1a, 6, 6a-tetra hydro	1000		
802	naphthalene, 1-methyl-	3700		
859	1, 1'-biphenyl	1800		
884	Naphthalene, 2, 7-dimethyl	1600		
897	naphthalene, 2, 3-dimethyl	2400		
1069	1h-phenalene	660		
1124	9H-fluorene, 4-methyl-	550		
1167	dibenzothiophene	510		
1271	phenanthrene, 3-methyl-	1300		

SAMPLE ID #6 FRACTION 11B TEST CODE MSNS S NAME GCMS Characterization-ABN
Date & Time Collected 07/01/85 Category

CHRO # 2CU07015C1 VERIFIED BY LAK
SAMPLE SIZE 920 ml DATE ANALYZED 07/05/85 UNITS ug/l

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
1285	phenanthrene, 4-methyl	1700		
1266	phenanthrene, 3-methyl	1200		
1314	naphthalene, 2-phenyl	840		

SAMPLE ID #7 FRACTION 12A TEST CODE MSNS V NAME GCMS Characterization-VOA
Date & Time Collected 07/01/85 Category

CHRO # 4CQ07015V2 VERIFIED BY LAK
SAMPLE SIZE 50 ul DATE ANALYZED 07/02/85 UNITS ug/l

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
483	total xylenes	2200		

SAMPLE ID #7 FRACTION 12A TEST CODE MS 624 NAME EPA Method 624/GC-MS
Date & Time Collected 07/01/85 Category

DATA FILE 4CV07015V12 DATE INJECTED 07/02/85 ANALYST MM VERIFIED BY LAK
CONC FACTOR 100 INSTRUMENT #4 COMPOUNDS DETECTED 3

NPDES	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
3V	251	4V	benzene	1500	17V		32V	1,2-dichloropropane	ND
6V		6V	carbon tetrachloride	ND	18V		33V	cis-1,3-dichloropropylene	ND
7V		7V	chlorobenzene	ND	18V		33V	trans-1,3-dichloropropylene	ND
13V		10V	1,2-dichloroethane	ND	19V	425	38V	ethylbenzene	2000
27V		11V	1,1,1-trichloroethane	ND	22V		44V	methylene chloride	ND
14V		13V	1,1-dichloroethane	ND	21V		45V	methyl chloride	ND
28V		14V	1,1,2-trichloroethane	ND	20V		46V	methyl bromide	ND
23V		15V	1,1,2,2-tetrachloroethane	ND	5V		47V	bromoform	ND
9V		16V	chloroethane	ND	12V		48V	dichlorobromomethane	ND
10V		19V	2-chloroethylvinyl ether	ND	30V		49V	trichlorofluoromethane	ND
11V		23V	chloroform	ND	8V		51V	chlorodibromomethane	ND
16V		29V	1,1-dichloroethylene	ND	24V		85V	tetrachloroethylene	ND
26V		30V	1,2-trans-dichloroethylene	ND	25V	373	86V	toluene	3000
					29V		87V	trichloroethylene	ND
					31V		88V	vinyl chloride	ND

SAMPLE ID #7 FRACTION 12A TEST CODE MS 624 NAME EPA Method 624/GC-MS
Date & Time Collected 07/01/85 Category

SURROGATE RECOVERIES

SCAN	CODE	COMPOUND	RESULT
145	VS1	d4-1,2-dichloroethane	90%
370	VS2	d8-toluene	95%
456	VS3	bromofluorobenzene	91%

NOTES AND DEFINITIONS FOR THIS REPORT
SCAN = scan number or retention time on chromatogram
All results reported in ug/l unless otherwise specified
ND = not detected at EPA detection limit method 624, (Federal Register, 10/26/84)
BL = detected in reagent blank, background subtraction not performed
J = estimated value, less than method detection limit
CONC FACTOR, indicates dilution of sample if greater than one (1) Minimum detection limits should be multiplied by conc factor

RADIAN CORPORATION

PAGE 13 Analytical Serv REPORT LAB # 85-07-015
RECEIVED: 07/02/85 NonReported Work

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

038 : DUP624

RADIAN CORPORATION

PAGE 1 Analytical Serv REPORT LAB # 85-07-165
RECEIVED: 07/22/85 02/07/86 16:25:29

REPORT TO: Radian
8l 4
Austin

ATTEN: Robt Wallace/Will Boettner

CLIENT: MAXIN SAMPLES: 6
COMPANY: Maxin Eng
FACILITY:

WORK ID: soil and water, RCRA
TAKEN: LH
TRANS: MW
TYPE:
P.O #: 229-025-01-20
INV #: 6167

PREPARED BY: Radian Analytical Services
8501 MoPac Blvd
P O Box 9948
Austin, Texas 78766

ATTEN:
PHONE: (512) 454-4797

CERTIFIED BY

CONTACT: GRIMSHAW

Duplicate of report of 07/24/85

Footnotes and Comments

* Indicates a value less than 5 times the detection limit. Potential error for such low values ranges between 50 and 100%

@ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present

SAMPLE IDENTIFICATION

01	LP-001
02	LP-002
03	LP-001 EP
04	LP-002 EP
05	LP-003
06	LP-004

Analytical Serv TEST CODES and NAMES used on this report

COR PH	Corrosivity
EP MET	RCRA Metals
IGNIT	Ignitability-aqueous
IGNITS	Ignitability-solids
MOIST	percent moisture
PH A	pH
REACT	Reactivity

TEST CODE default units	Sample 01 (entered units)	Sample 02 (entered units)	Sample 05 (entered units)	Sample 06 (entered units)
COR_PH pH units	6.29	6.34		
IGNIT degrees F			>160	>160
IGNITS yes/no	no	no		
MOIST %	10	18		
PH_A pH units			7.96	7.97
REACT + or -	-	-	-	-

RADIAN CORPORATION

SAMPLE ID LP-001 EP FRACTION 03A TEST CODE EP MET NAME RCRA Metals
Date & Time Collected not specified Category

DATE ANALYZED 07/22/85 VERIFIED BY CMC

CODE	METAL	RESULT	CODE	METAL	RESULT
AG	Silver	0.017	AS	Arsenic	0.08*
BA	Barium	0.56	HG	Mercury	<0.0002
CD	Cadmium	<0.002	PB	Lead	<0.08
CR	Chromium	0.024*	SE	Selenium	0.08*

NOTES AND DEFINITIONS FOR THIS REPORT

All results reported in ug/ml unless otherwise specified.
NA = not analyzed
* = less that 5 times the detection limit.
All elements determined by ICPES except Hg.

PAGE 4 Analytical Serv REPORT LAB # 85-07-165
RECEIVED: 07/[redacted]85 Results by Samp[redacted]

SAMPLE ID LP-002 EP FRACTION 04A TEST CODE EP MET NAME RCRA Metals
Date & Time Collected not specified Category

DATE ANALYZED 07/22/85 VERIFIED BY GMC

CODE	METAL	RESULT	CODE	METAL	RESULT
AG	Silver	0 015	AS	Arsenic	0 08*
BA	Barium	0 36	HG	Mercury	<0 0002
CD	Cadmium	<0 002	PB	Lead	<0 08
CR	Chromium	0 022*	SE	Selenium	<0 08

NOTES AND DEFINITIONS FOR THIS REPORT

All results reported in ug/ml unless otherwise specified.
NA = not analyzed
* = less that 5 times the detection limit.
All elements determined by ICPES except Hg.

RADIAN CORPORATION

PAGE 5 Analytical Serv REPORT LAB # 85-07-165
RECEIVED: 07/22/85 Results by Sample

SAMPLE ID LP-003 FRACTION 05A TEST CODE EP MET NAME RCRA Metals
Date & Time Collected 07/19/85 Category

DATE ANALYZED 07/22/85 VERIFIED BY GMC

CODE	METAL	RESULT	CODE	METAL	RESULT
AG	Silver	<0 002	AS	Arsenic	<0 06
BA	Barium	0 28	HG	Mercury	<0 0002
CD	Cadmium	<0 002	PB	Lead	<0 06
CR	Chromium	0 13	SE	Selenium	<0 06

NOTES AND DEFINITIONS FOR THIS REPORT

All results reported in ug/ml unless otherwise specified
NA = not analyzed
* = less that 5 times the detection limit
All elements determined by ICPES except Hg

SAMPLE ID LP-004 FRACTION 06A TEST CODE EP MET NAME RCRA Metals
Date & Time Collected 07/19/85 Category

DATE ANALYZED 07/22/85 VERIFIED BY GMC

CODE	METAL	RESULT	CODE	METAL	RESULT
AG	Silver	<0.002	AS	Arsenic	0.01*
BA	Barium	0.28	HG	Mercury	<0.0002
CD	Cadmium	<0.002	PB	Lead	<0.08
CR	Chromium	0.010*	SE	Selenium	<0.08

NOTES AND DEFINITIONS FOR THIS REPORT

All results reported in ug/ml unless otherwise specified.
NA = not analyzed
* = less that 5 times the detection limit.
All elements determined by ICPES except Hg.

RADIAN CORPORATION

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01C	: LOG_IN	01D	: LOG_IN	01E	: LOG_IN			
02C	: LOG_IN	02D	: LOG_IN	02E	: LOG_IN			
03B	: LOG_IN							
04B	: LOG_IN							
05C	: LOG_IN	05D	: LOG_IN	05E	: LOG_IN			
06C	: LOG_IN	06D	: LOG_IN	06E	: LOG_IN	06F	:	LOG_IN

RADIAN CORPORATION

PAGE 1 Analytical Serv REPORT LAB # 85-10-058
RECEIVED: 10/10/85 02/07/86 16:26:18

REPORT TO: Radian, Bl. 4, Austin
ATTEN: Robert Wallace
CLIENT: LINCOLN SAMPLES: 3
COMPANY: Lincoln Properties
FACILITY: Congress Av.

WORK ID: pre- and post-treatment
TAKEN: BJH
TRANS: BJH
TYPE:
P.O. #: 229-025-05-20
INV. #: 6724

PREPARED BY: Radian Analytical Services, 8501 MoPac Blvd, P.O. Box 9948, Austin, Texas 78766
ATTEN:
PHONE: (512) 454-4797

CERTIFIED BY
CONTACT: GRIMSHAW

**Sample was yellow in color.
B-Compound detected in Reagent Blank at less than method MDL; background correction not performed.
NA-Not applicable

Duplicate of report of 10/31/85

Footnotes and Comments

* Indicates a value less than 5 times the detection limit. Potential error for such low values ranges between 50 and 100%

@ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present

SAMPLE IDENTIFICATION

01	Con-1
02	Con-2
03	Con-3

Analytical Serv TEST CODES and NAMES used on this report

AG_E	Silver, ICPES	M625_A	Method 625 Acid Compounds
AS_HA	Arsenic Hydride	M625_B	Method 625 Base/Neutrals
BA_E	Barium, ICPES	MN_E	Manganese, ICPES
BOD5	Biological Oxygen Demand	MS_624	EPA Method 624/GC-MS
B_E	Boron, ICPES	NI_E	Nickel, ICPES
CD_E	Cadmium, ICPES	OPO4_A	Orthophosphate
CH2O	Formaldehyde	PB_GA	Lead, low level
CL_IC	Chloride IC	PH_A	pH
COD_A	Chemical Oxygen Demand	SE_HA	Selenium Hydride
CR_E	Chromium, ICPES	SO4_IC	Sulfate IC
CU_E	Copper, ICPES	ZN_E	Zinc, ICPES
EX_625	Extraction only - 625 BN/A		
HG_CA	Mercury, Cold Vapor		

RADIAN CORPORATION

TEST CODE (default units)	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)
AG_E ug/ml	0.004*	0.003*	
AS_HA ug/ml	0.007*	0.007*	
BA_E ug/ml	0.18	0.084	
BOD5 mg/L	4	1	
B_E ug/ml	1.1	0.23*	
CD_E ug/ml	<0.002	<0.002	
CH2O mg/L	0.2	0.2**	
CL_IC mg/L	72	77	
COD_A mg/L	110	7	
CR_E ug/ml	0.013*	0.010*	
CU_E ug/ml	0.008	0.001*	
EX_625 date complete	10/15/85	10/15/85	10/15/85
HG_CA ug/ml	<0.0002	<0.0002	
MN_E ug/ml	0.12	0.016	

NI_E ug/ml	0.017	0.003*
OPO4_A mg/L	1.5	0.18
PB_GA ug/ml	<0.002	<0.002
PH_A pH units	8.16	8.25
SE_HA ug/ml	<0.002	<0.002
SO4_IC mg/L	740	345
ZN_E ug/ml	0.003*	<0.003

SAMPLE ID Con-1 FRACTION O1G TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 10/03/85 Category

DATA FILE 2CU10058C01 DATE EXTRACTED 10/15/85 ANALYST SF VERIFIED BY LAK
CONC FACTOR 1 DATE INJECTED 10/23/85 INSTRUMENT 32 COMPOUNDS DETECTED 0

NPDES	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
11A		21A	2,4,6-trichlorophenol	ND	7A		58A	4-nitrophenol	ND
8A		22A	4-chloro-3-methylphenol	ND	5A		59A	2,4-dinitrophenol	ND
1A		24A	2-chlorophenol	ND	4A		60A	2-methyl-4,6-dinitrophenol	ND
2A		31A	2,4-dichlorophenol	ND	9A		64A	pentachlorophenol	ND
3A		34A	2,4-dimethylphenol	ND	10A		65A	phenol	ND
6A		57A	2-nitrophenol	ND					

SURROGATE RECOVERIES

SCAN	CODE	COMPOUND	RESULT
446	AS1	d5-phenol	84
333	AS2	2-fluorophenol	42
1065	AS3	2,4,6-tribromophenol	82
	AS4	d3-phenol	na

NOTES AND DEFINITIONS FOR THIS REPORT
SCAN = scan number or retention time on chromatogram
All results reported in ug/l unless otherwise specified

RADIAN CORPORATION

PAGE 5 Analytical Serv REPORT LAB # 85-10-058
RECEIVED: 10/[illegible]/85 Results by Sample Continued From Above

SAMPLE ID Con-1 FRACTION 01G TEST CODE M625 A NAME Method 625 Acid Compounds
Date & Time Collected 10/03/85 Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).
BL = detected in reagent blank; background subtraction not performed.
J = estimated value; less than method detection limit.
CONC FACTOR, indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc factor

RADIAN CORPORATION

PAGE 6 Analytical Serv REPORT LAB # 85-10-058
RECEIVED: 10/10/85 Results by Sample

SAMPLE ID Con-1 FRACTION 01G TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 10/03/85 Category

DATA FILE 2CU1005B01 DATE EXTRACTED 10/15/85 ANALYST SF VERIFIED BY LAK
CONC FACTOR 1 DATE INJECTED 10/23/85 INSTRUMENT 32 COMPOUNDS DETECTED 8

NPDES	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
1B	946	1B	acenaphthene	7	41B		61B	N-nitrosodimethylamine	ND
4B		5B	benzidine	ND	43B		62B	N-nitrosodiphenylamine	ND
46B		8B	1,2,4-trichlorobenzene	ND	42B		63B	N-nitrosodi-n-propylamine	ND
33B		9B	hexachlorobenzene	ND	13B	1611	66B	bis(2-ethylhexyl)phthalate	7
36B		12B	hexachloroethane	ND	15B		67B	butyl benzyl phthalate	ND
11B		18B	bis(2-chloroethyl)ether	ND	26B	1276	68B	di-butyl phthalate	10
16B		20B	2-chloronaphthalene	ND	29B		69B	di-n-octyl phthalate	ND
20B		25B	1,2-dichlorobenzene	ND	24B		70B	diethyl phthalate	ND
21B		26B	1,3-dichlorobenzene	ND	25B		71B	dimethyl phthalate	ND
22B		27B	1,4-dichlorobenzene	ND	5B		72B	benzo(a)anthracene A	ND
23B		28B	3,3'dichlorobenzidine	ND	6B		73B	benzo(a)pyrene	ND
27B		35B	2,4-dinitrotoluene	ND	7B		74B	benzo(b)fluoranthene *	ND
28B		36B	2,6-dinitrotoluene	ND	9B		75B	benzo(k)fluoranthene *	ND
29B		37B	1,2-diphenylhydrazine	ND	10B		76B	chrysene A	ND
31B	1366	39B	fluoranthene	5	2B		77B	acenaphthylene	ND
17B		40B	4-chlorophenyl phenyl ether	ND	3B	1183	78B	anthracene B	3

SAMPLE ID Con-1 FRACTION 01G TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 10/03/85 Category

14B		41B	4-bromophenyl phenyl ether	ND		8B		79B	benzo(ghi)perylene ND
12B		42B	bis(2-chloroisopropyl)ether	ND		32B	1025	80B	fluorene 3
10B		43B	bis(2-chloroethoxy)methane	ND		44B	1175	81B	phenanthrene B 8
34B		52B	hexachlorobutadiene	ND		19B		82B	dibenzo(a,h)anthracene ND
35B		53B	hexachlorocyclopentadiene	ND		37B		83B	indeno(1,2,3-cd)pyrene ND
38B		54B	isophorone	ND		45B		84B	pyrene ND
39B	673	55B	naphthalene	3					
40B		56B	nitrobenzene	ND					

SURROGATE RECOVERIES

SCAN	CODE	RESULT	
566	BS1	d5-nitrobenzene	84
838	BS2	2-fluorobiphenyl	65
1429	BS3	d14-terphenyl	37
	BS4	d10-biphenyl	na

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram
All results reported in ug/l unless otherwise specified
ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
A = benzo(a)anthracene and chrysene co-elute in high concentrations

SAMPLE ID Con-1 FRACTION 01G TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 10/03/85 Category

B = anthracene and phenanthrene co-elute in high concentrations
BL = detected in reagent blank, background subtraction not performed.
J = estimated value, less than method detection limit.
CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc factor

SAMPLE ID Con-1 FRACTION 01E TEST CODE MS 624 NAME EPA Method 624/GC-MS
Date & Time Collected 10/03/85 Category

DATA FILE 4CU10058V01 DATE INJECTED 10/16/85 ANALYST MM VERIFIED BY LAK
CONC. FACTOR 1 INSTRUMENT 3400 COMPOUNDS DETECTED 1

NPDES	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
3V		4V	benzene	ND	17V		32V	1,2-dichloropropane	ND
6V		6V	carbon tetrachloride	ND	18V		33V	cis-1,3-dichloropropylene	ND
7V		7V	chlorobenzene	ND	18V		33V	trans-1,3-dichloropropylene	ND
15V		10V	1,2-dichloroethane	ND	19V		38V	ethylbenzene	ND
27V		11V	1,1,1-trichloroethane	ND	22V	106	44V	methylene chloride	10 B
14V		13V	1,1-dichloroethane	ND	21V		45V	methyl chloride	ND
28V		14V	1,1,2-trichloroethane	ND	20V		46V	methyl bromide	ND
23V		15V	1,1,2,2-tetrachloroethane	ND	5V		47V	bromoform	ND
9V		16V	chloroethane	ND	12V		48V	dichlorobromomethane	ND
10V		19V	2-chloroethylvinyl ether	ND	30V		49V	trichlorofluoromethane	ND
11V		23V	chloroform	ND	8V		51V	chlorodibromomethane	ND
16V		29V	1,1-dichloroethylene	ND	24V		85V	tetrachloroethylene	ND
26V		30V	1,2-trans-dichloroethylene	ND	25V		86V	toluene	ND
					29V		87V	trichloroethylene	ND
					31V		88V	vinyl chloride	ND

SAMPLE ID Con-1 FRACTION 01E TEST CODE MS 624 NAME EPA Method 624/GC-MS
Date & Time Collected 10/03/85 Category

SURROGATE RECOVERIES

SCAN	CODE	COMPOUND	RESULT
199	VS1	d4-1,2-dichloroethane	82
385	VS2	d8-toluene	100
473	VS3	bromofluorobenzene	56

NOTES AND DEFINITIONS FOR THIS REPORT
SCAN = scan number or retention time on chromatogram
All results reported in ug/l unless otherwise specified.
ND = not detected at EPA detection limit method 624. (Federal Register, 10/26/84)
BL = detected in reagent blank: background subtraction not performed.
J = estimated value, less than method detection limit
CONC. FACTOR = indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor

SAMPLE ID Con-2 FRACTION 02G TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 10/07/85 Category

DATA FILE 2CU1005BC02 DATE EXTRACTED 10/15/85 ANALYST WJL VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 10/22/85 INSTRUMENT 32 COMPOUNDS DETECTED 2

NPDES	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
1B		1B	acenaphthene	ND	41B		61B	N-nitrosodimethylamine	ND
4B		5B	benzidine	ND	43B		62B	N-nitrosodiphenylamine	ND
46B		8B	1,2,4-trichlorobenzene	ND	42B		63B	N-nitrosodi-n-propylamine	ND
33B		9B	hexachlorobenzene	ND	13B	1615	66B	bis(2-ethylhexyl)phthalate	6
36B		12B	hexachloroethane	ND	15B		67B	butyl benzyl phthalate	ND
11B		18B	bis(2-chloroethyl)ether	ND	26B	1279	68B	di-butyl phthalate	14
16B		20B	2-chloronaphthalene	ND	29B		69B	di-n-octyl phthalate	ND
20B		25B	1,2-dichlorobenzene	ND	24B		70B	diethyl phthalate	ND
21B		26B	1,3-dichlorobenzene	ND	25B		71B	dimethyl phthalate	ND
22B		27B	1,4-dichlorobenzene	ND	5B		72B	benzo(a)anthracene A	ND
23B		28B	3,3'dichlorobenzidine	ND	6B		73B	benzo(a)pyrene	ND
27B		35B	2,4-dinitrotoluene	ND	7B		74B	benzo(b)fluoranthene *	ND
28B		36B	2,6-dinitrotoluene	ND	9B		75B	benzo(k)fluoranthene *	ND
29B		37B	1,2-diphenylhydrazine	ND	18B		76B	chrysene A	ND
31B		39B	fluoranthene	ND	2B		77B	acenaphthylene	ND
17B		40B	4-chlorophenyl phenyl ether	ND	3B		78B	anthracene B	ND

SAMPLE ID Con-2 FRACTION 02G TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 10/07/85 Category

14B		41B	4-bromophenyl phenyl ether	ND	8B		79B	benzo(ghi)perylene	ND
12B		42B	bis(2-chloroisopropyl)ether	ND	32B		80B	fluorene	ND
10B		43B	bis(2-chloroethoxy)methane	ND	44B		81B	phenanthrene B	ND
34B		52B	hexachlorobutadiene	ND	19B		82B	dibenzo(a,h)anthracene	ND
35B		53B	hexachlorocyclopentadiene	ND	37B		83B	indeno(1,2,3-cd)pyrene	ND
38B		54B	isophorone	ND	45B		84B	pyrene	ND
39B		55B	naphthalene	ND					
40B		56B	nitrobenzene	ND					

SURROGATE RECOVERIES

SCAN	CODE	RESULT	
568	BS1	d5-nitrobenzene	107
840	BS2	2-fluorobiphenyl	81
1432	BS3	d14-terphenyl	64
	BS4	d10-biphenyl	na

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram
All results reported in ug/l unless otherwise specified
ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.
A = benzo(a)anthracene and chrysene co-elute in high concentrations

SAMPLE ID Con-2 FRACTION 02G TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 10/07/85 Category

B = anthracene and phenanthrene co-elute in high concentrations.
BL = detected in reagent blank, background subtraction not performed.
J = estimated value; less than method detection limit
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc factor

RADIAN CORPORATION

SAMPLE ID Con-2 FRACTION 02E TEST CODE MS 624 NAME EPA Method 624/GC-MS
Date & Time Collected 10/07/85 Category

DATA FILE 4CU10058V02 DATE INJECTED 10/16/85 ANALYST MM VERIFIED BY LAB
CONC FACTOR 1 INSTRUMENT 3400 COMPOUNDS DETECTED 1

NPDES	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
3V		4V	benzene	ND	17V		32V	1,2-dichloropropane	ND
6V		6V	carbon tetrachloride	ND	18V		33V	cis-1,3-dichloropropylene	ND
7V		7V	chlorobenzene	ND	18V		33V	trans-1,3-dichloropropylene	ND
15V		10V	1,2-dichloroethane	ND	19V		38V	ethylbenzene	ND
27V		11V	1,1,1-trichloroethane	ND	20V	102	44V	methylene chloride	1 J B
14V		13V	1,1-dichloroethane	ND	21V		45V	methyl chloride	ND
28V		14V	1,1,2-trichloroethane	ND	20V		46V	methyl bromide	ND
23V		15V	1,1,2,2-tetrachloroethane	ND	5V		47V	bromoform	ND
9V		16V	chloroethane	ND	12V		48V	dichlorobromomethane	ND
10V		19V	2-chloroethyl vinyl ether	ND	30V		49V	trichlorofluoromethane	ND
11V		23V	chloroform	ND	8V		51V	chlorodibromomethane	ND
16V		29V	1,1-dichloroethylene	ND	24V		85V	tetrachloroethylene	ND
26V		30V	1,2-trans-dichloroethylene	ND	25V		86V	toluene	ND
					29V		87V	trichloroethylene	ND
					31V		88V	vinyl chloride	ND

SAMPLE ID Con-2 FRACTION 02E TEST CODE MS 624 NAME EPA Method 624/GC-MS
Date & Time Collected 10/07/85 Category

SURROGATE RECOVERIES

SCAN	CODE	COMPOUND	RESULT
198	VS1	d4-1,2-dichloroethane	86
384	VS2	d8-toluene	100
473	VS3	bromofluorobenzene	95

NOTES AND DEFINITIONS FOR THIS REPORT.
SCAN = scan number or retention time on chromatogram
All results reported in ug/l unless otherwise specified
ND = not detected at EPA detection limit method 624, (Federal Register, 10/26/84).
BL = detected in reagent blank; background subtraction not performed
J = estimated value; less than method detection limit.
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc factor

RADIAN CORPORATION

SAMPLE ID Con-3 FRACTION 03A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 09/27/85 Category

DATA FILE 2CV10038C03 DATE EXTRACTED 10/15/85 ANALYST WL VERIFIED BY LAK
CONC. FACTOR 1 DATE INJECTED 10/22/85 INSTRUMENT 32 COMPOUNDS DETECTED 1

NPDES	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
1B		1B	acenaphthene	ND	41B		61B	N-nitrosodimethylamine	ND
4B		5B	benzidine	ND	43B		62B	N-nitrosodiphenylamine	ND
46B		8B	1,2,4-trichlorobenzene	ND	42B		63B	N-nitrosodi-n-propylamine	ND
33B		9B	hexachlorobenzene	ND	13B		66B	bis(2-ethylhexyl)phthalate	ND
36B		12B	hexachloroethane	ND	15B		67B	butyl benzyl phthalate	ND
11B		18B	bis(2-chloroethyl)ether	ND	26B	1277	68B	di-butyl phthalate	14
16B		20B	2-chloronaphthalene	ND	29B		69B	di-n-octyl phthalate	ND
20B		25B	1,2-dichlorobenzene	ND	24B		70B	diethyl phthalate	ND
21B		26B	1,3-dichlorobenzene	ND	25B		71B	dimethyl phthalate	ND
22B		27B	1,4-dichlorobenzene	ND	5B		72B	benzo(a)anthracene A	ND
23B		28B	3,3'dichlorobenzidine	ND	6B		73B	benzo(a)pyrene	ND
27B		35B	2,4-dinitrotoluene	ND	7B		74B	benzo(b)fluoranthene *	ND
28B		36B	2,6-dinitrotoluene	ND	9B		75B	benzo(k)fluoranthene *	ND
29B		37B	1,2-diphenylhydrazine	ND	18B		76B	chrysene A	ND
31B		39B	fluoranthene	ND	2B		77B	acenaphthylene	ND
17B		40B	4-chlorophenyl phenyl ether	ND	3B		78B	anthracene B	ND

SAMPLE ID Con-3 FRACTION 03A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 09/27/85 Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN	CODE		RESULT
568	BS1	d5-nitrobenzene	82
1066	BS2	2-fluorobiphenyl	74
1430	BS3	d14-terphenyl	53
	BS4	d10-biphenyl	na

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram
All results reported in ug/l unless otherwise specified.
ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).
* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute
A = benzo(a)anthracene and chrysene co-elute in high concentrations.

SAMPLE ID Con-3 FRACTION 03A TEST CODE M625 B NAME Method 625 Base/Neutrals
Date & Time Collected 09/27/85 Category

B = anthracene and phenanthrene co-elute in high concentrations
BL = detected in reagent blank, background subtraction not performed.
J = estimated value, less than method detection limit
CONC. FACTOR. indicates dilution of sample if greater than one (1) Minimum detection limits should be multiplied by conc. factor

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01F : DUP624
02F : DUP624

RADIAN CORPORATION

PAGE 1 Analytical Serv REPORT LAB # 85-10-160
RECEIVED: 10/23/85 02/07/86 16:28:48

REPORT TO: Radian
B1 4
Austin

ATTEN: Robert Wallace

CLIENT: LINCOLN SAMPLES: 1
COMPANY: Lincoln Property Co.
FACILITY:

WORK ID: RCRA
TAKEN: RW
TRANS: RW
TYPE:
P O #: 229-025-06-10
INV. #: 6953

PREPARED BY: Radian Analytical Services
8501 MoPac Blvd.
P O Box 9948
Austin, Texas 78766
ATTEN:
PHONE: (512) 454-4797

CERTIFIED BY:
CONTACT: GRIMSHAW

Duplicate of report of 12/05/85.

Footnotes and Comments

* Indicates a value less than 5 times the detection limit. Potential error for such low values ranges between 50 and 100%.

@ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

SAMPLE IDENTIFICATION
01 warehouse hole #1

Analytical Serv TEST CODES and NAMES used on this report

COR PH	Corrosivity
EP EXT	RCRA Extraction Procedure
EP MET	RCRA Metals
EX 509	Extraction only-509B Herb
EX 608	Extraction only - 608
HiRCRA	RCRA Herbicides
IGNITS	Ignitability-solids
PiRCRA	RCRA Pesticides
REACT	Reactivity

RADIAN CORPORATION

PAGE 2 Analytical Serv REPORT LAB # 85-10-160
RECEIVED: 10/23/85 RESULTS BY TEST

TEST CODE default units	Sample 01 (entered units)
COR_PH pH units	10.15
EP_EXT date completed	11/08/85
EX_509 date complete	11/20/85
EX_608 date complete	11/20/85
IGNITS yes/no	no
REACT + or -	-

RADIAN CORPORATION

PAGE 3 Analytical Serv REPORT LAB # 85-10-160
RECEIVED: 10/23/85 Results by Sample

SAMPLE ID warehouse hole #1 FRACTION 01C TEST CODE EP MET NAME RCRA Metals
Date & Time Collected 10/23/85 Category

DATE ANALYZED 11/13/85 VERIFIED BY GCL

CODE	METAL	RESULT	CODE	METAL	RESULT
AG	Silver	< 002	AS	Arsenic	< 06
BA	Barium	0 025	HG	Mercury	< 0002
CD	Cadmium	< 002	PB	Lead	< 08
CR	Chromium	< 005	SE	Selenium	< 05

NOTES AND DEFINITIONS FOR THIS REPORT

All results reported in ug/ml unless otherwise specified
NA = not analyzed
* = less that 5 times the detection limit.
All elements determined by ICPES except Hg.

SAMPLE ID warehouse hole #1 FRACTION 01D TEST CODE H1RCRA NAME RCRA Herbicides
Date & Time Collected 10/23/85 Category

DATE EXTRACTED 11/20/85 DATE INJECTED 11/22/85 VERIFIED BY SCM
CONCENTRATION FACTOR 50 ANALYST LF

COMPOUND	RESULT	DET LIMIT	OTHER HERBICIDES	RESULT	DET. LIMIT
2,4-D	ND	1 0			
2,4,5-TP (Silvex)	ND	0 1			

NOTES AND DEFINITIONS FOR THIS REPORT.
ND = not detected at the specified detection limit
All results reported in micrograms/liter unless otherwise specified.

SAMPLE ID warehouse hole #1 FRACTION 01D TEST CODE P1RCRA NAME RCRA Pesticides
Date & Time Collected 10/23/85 Category

DATE EXTRACTED 11/20/85 DATE INJECTED 11/25/85 VERIFIED BY SCM
CONCENTRATION FACTOR 5 ANALYST LF

COMPOUND	RESULT	DET LIMIT	OTHER PESTICIDES	RESULT	DET. LIMIT
Lindane	ND	0 4			
Endrin	ND	0 4			
Methoxychlor	ND	2 0			
Toxaphene	ND	20 0			

NOTES AND DEFINITIONS FOR THIS REPORT

SAMPLE ID warehouse hole #1 FRACTION 01D TEST CODE P1RCRA NAME RCRA Pesticides
Date & Time Collected 10/23/85 Category

ND = not detected at the specified detection limit.
All results reported in micrograms/liter unless otherwise specified

REPORT TO: Radian
81 4
Austin

ATTEN: Robert Wallace

CLIENT: LINCOLN SAMPLES: 1
COMPANY: Lincoln Property Co
FACILITY:

WORK ID: alkalinity
TAKEN: RW
TRANS: RW
TYPE:
P O #: 229-025-06-10
INV #: 7052

PREPARED BY: Radian Analytical Services
8501 MoPac Blvd
P O Box 9948
Austin, Texas 78766
ATTEN:
PHONE: (512) 454-4797

CERTIFIED BY:
CONTACT: GRIMSHAW

Duplicate of report of 12/16/85

Footnotes and Comments

* Indicates a value less than 5 times the detection limit Potential error for such low values ranges between 50 and 100%

@ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

SAMPLE IDENTIFICATION

01 warehouse hole #1

Analytical Serv TEST CODES and NAMES used on this report

ALK_A	Total Alkalinity
PREP_W	Special Digestion Method
SO4_IC	Sulfate IC

RADIAN CORPORATION

TEST CODE default units	Sample 01 (entered units)
ALK_A mg/L as CaCO3	2353 ug/g as CaCO3
PREP_W date complete	12/09/85
SO4_IC mg/L	300 ug/g

RECORD OF COMMUNICATION

☒ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY) ATTACHMENT M
(Record of item checked above)

TO:	FROM:	DATE
Kevin Fleming	Frerhalen	1:20 pm
Lincoln Properties (512)	499-8811	TIME 5-29-86

SUBJECT

Re: Coal tar waste pit, 1st & Congress Sts, Austin TX

SUMMARY OF COMMUNICATION

Begun building - adjacent city property

Still getting water - plan to excavate pit eventually. Water sifting through but is now under slab.

THD - level #1 landfill.

8:00 am.

100 Congress west side - Vantage

CONCLUSIONS, ACTION TAKEN OR REQUIRED

INFORMATION COPIES TO: